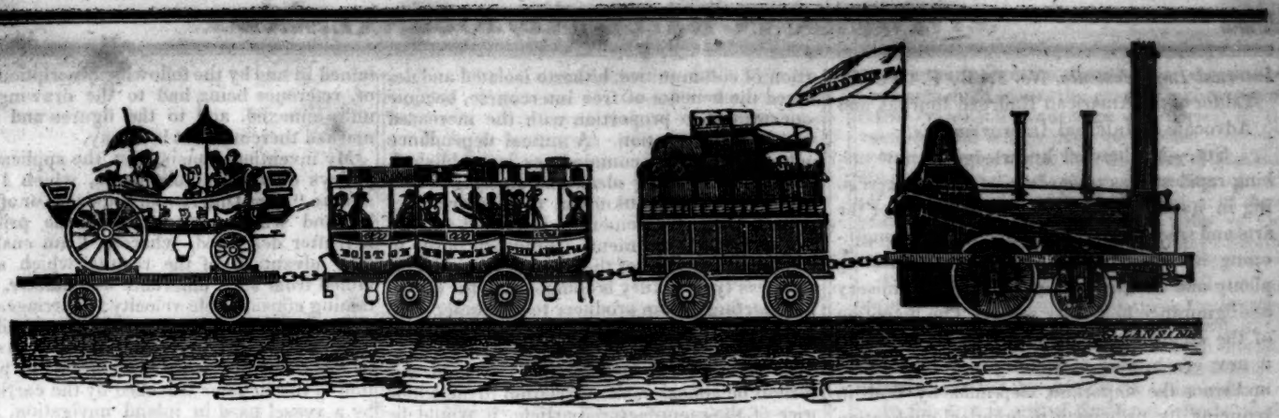

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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D. K. MINOR, Editor.] SATURDAY, NOVEMBER 16, 1833. [VOLUME II.—No. 46.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, NOVEMBER 16, 1833.

The Alexandria Gazette copies from the Baltimore Gazette the annexed paragraph:

"Our experience in Baltimore, in regard to Railroad travelling, has furnished satisfactory evidence to sustain fully the opinion, 'that it is the most secure mode of travelling.'"

And then remarks that

"*Our* observation, made by a perusal of public prints, from all parts of the country, satisfies us that Railroad travelling is the most *insecure* mode that has ever yet been invented. We speak entirely without prejudice."

We should have been inclined, but for the candor of the editor of the Alexandria Gazette, in disclaiming any thing like prejudice, to believe that he was somewhat under its influence when he says that he has, "from reading the public prints from all parts of the country, *satisfied himself that railroad travelling is the most insecure mode that has ever yet been invented.*" He is, however, a gentleman of too much candor to be suspected of a desire to prejudice others, and we must therefore conclude that he has forgotten the frequent and appalling accounts of *steamboat explosions*, by which, not only hundreds, but *thousands*, have lost their lives. It is true, and we would not wish to disguise, that several *serious* accidents have occurred upon railroads—not so many however as to render them liable to be considered the "*most* unsafe mode of travelling ever yet invented." It appears to us from the information we have received, that most of the accidents which have occurred to persons, on our railroads, have been occasioned by the carelessness of the persons injured, and not from any mismanagement of the Railroad Companies, or their special agents. No agent or engineer should be held accountable for the indiscretion of a passenger, who attempts to get from a car when in motion, or other persons attempt to cross the *track* in front of a train of cars.

The late unfortunate accident on the Camden and Amboy Railroad, as serious as it is, cannot, we think, from the report, which will be found in the Journal, of a committee of investigation, be chargeable either to want of care in the arrangements or in the agents, as we presume there is not another company in this country which has taken more care to *prevent* accidents than that of the Camden and Amboy Railroad. An agent expressly to *keep the time*, and another to tend the brake, and keep a look out and give notice of danger.

We think we shall be borne out by facts when we estimate the loss of life and property by the explosion and destruction of *steamboats*, to be at least *twice*, if not three times, as great in an equal number of passengers, and amount of business, as by accidents upon, or pertaining to, railroads. And as an additional, and, we regret to say, most melancholy evidence of it, we give the following heart-rending account of new disasters on the Mississippi river, by which *forty* lives were lost, and several others seriously injured, with the loss of more than $200,000 in property.

From the New-Orleans Mercantile Advertiser Extra, of Friday, Nov. 1.

Distressing.—It is with feelings of the deepest regret we lay before our readers the following distressing news, politely furnished us by the clerk of the steamboat Black Hawk, arrived here this morning about half past four o'clock.

Extract from log-book of steamboat Black Hawk, P. S. Hartshorne, master, October 29, 5 P. M.:

At Foot of 98, discovered the wreck of steamboat New-Brunswick, came to, and took on board one of her crew, from whom we learnt that she took fire the day before, at 4 P. M. and was entirely destroyed—no lives lost, but that none of the cargo was saved.

Another, and more Distressing.—Oct. 31, came up to the wreck of the steamboat St. Martin, two miles above Donaldsonville, rounded to, and received on board those that were saved.

The St. Martin was from Bayou Sarah, and had about 500 bales of cotton and 90 hhds. sugar; she was discovered to be on fire about 12 o'clock *this day*, and melancholy to relate about 40 persons were LOST by fire and water. Of the officers and crew missing are the captain, clerk, 2d mate, 2d steward, cabin boy, chamber maid, 2 cooks, bar keeper, 4 sailors, and 5 firemen. Several passengers were lost, among the number Capt. Sengstack, N. Moss, Esq. of N. Orleans, and servant, Mr. Whiting, of Franklin, Mr. Easton and servant, of Opelousas, Mr. Allen, Mrs. Willis, of Bayou Sarah, a lady, name unknown, and 3 servants—Mr. J. F. Miller, of New-Orleans, was badly burnt—several passengers say that she had on board about *fifty thousand dollars*, belonging to some of the Banks in New-Orleans, which is lost.

John W. Owens, Clerk.

Railroad.—We are gratified to learn that the railroad will be ready for the transportation of passengers and goods, as far as the Bergen hill, by about the 1st of December. The rails are now laid, we understand, except upon about half a mile of this distance, and the bridges all completed. Our manufacturers and others will, we presume, gladly avail themselves of its facilities, which will be especially important in the coming season of bad roads, and when the river is closed. Suitable arrangements will of course be made for the conveyance of passengers and goods from the termination of the railroad to and from the ferry.—[Paterson Intelligencer.]

Clinton, Oct. 25, 1833.

We learn that Col. Crozat, civil engineer of the State, and Mr. Welch, the assistant engineer, have resumed the survey of the Clinton and Port Hudson railroad.—[New-Orleans Mer. Adv.]

Pennsylvania Canal.—It is stated in an official report of the receipts and business of this canal for the year past, ending on 1st November, that the canal was only closed one month during the year, February, and such, it is added, has been the case ever since it was first opened. This is a fact of great interest to New York, as unless we can compensate by a reduction of tolls and greater facilities of transportation, for the greatly longer period (from three to four months,) during which, the Erie canal is closed, we may be in danger of seeing a considerable portion of its trade to the far West diverted.

Internal Improvements, No. I. By F. To the Editor of the American Railroad Journal, and Advocate of Internal Improvements.

Sir,—Mechanical knowledge is now making rapid strides towards perfection, exercising in its progress a genial influence over the arts and sciences of the civilized world, strengthening its ties of intercourse, and dispensing plenty and intelligence where formerly misery and ignorance held their sway. The invention of the steam engine alone may be regarded as a new era in the domestic policy of nations, and since the important step made by Watt in reducing its principles to practical application by an investigation of its physical properties, its course has been steadily onward, engaging in its service more talent, ingenuity, and labor, and producing more national and individual wealth, than any other human invention. Its gradual development gave an impetus that has led to all the numerous discoveries and improvements in the different branches of manufactures, and raised them to their present high state of perfection. But a few years have elapsed when the wondrous effects now resulting from the application of this subtile fluid, before its capacity of adaptation was known, could only have found place to grace the pages of fiction, or adorn a tale of romance. Who would then have credited the assertion, if made, that hundreds were under its influence, daily travelling the country, navigating rivers, and traversing lakes and seas, at the rate of thirty miles per hour; and that at this high degree of velocity they were in the indulgence of every luxury and comfort that their own private apartments could afford? Had its accomplishment been then predicted, instead of serving as a beacon-light to guide the intelligence of men of science and learning, it would have been treated simply as the wild dream of an enthusiast, and elicited naught save contempt from many who are now proud to acknowledge themselves among its warmest advocates. For there are many persons still living, scarce passed the meridian of life, who blush to have regarded the idea as visionary; and, refusing the subject the effort of a thought, have even suspected the intellect of the person who predicted its eventual realization. Strange as this incredulity may now appear, it is none the less true; and a few years may yet prove to us that the principle is in its infancy; that it is destined to fulfil still higher duties; and that its sphere of usefulness is to be widely extended. It would be no unprofitable lesson to mark the influence which physical science, in its different stages, has exercised over the moral and political character of nations. It would be found that nearly in the same proportion that mechanics have advanced towards perfection, the world has advanced in civilization; that as its principles have been developed, its condition has been bettered; in short, it has been one of the grand moving principles by which these effects have been produced. But this investigation becomes not the present paper; and however grateful be the task to pay a passing tribute to the inventive talents and sublime genius of the great men who have preceded us, and laid the foundation on which the superstructure of civilization is being reared, it must be abstained from here to give place to the matter more immediately claiming our attention.

The astonishing change effected by the system of internal improvements, in the transition of persons and intelligence from place to place, has been productive of consequences not easily to be calculated. Distances being now estimated by *time* instead of *miles*, the mind and exertion of communities, hitherto isolated and deprived the benefits of free intercourse, become concentrated in proportion with the increased velocity of locomotion. A mutual dependance and interchange of commodities is established, which, in enlarging ideas and creating wants and desires before unknown, must operate beneficially as an incitement to increased activity for their accomplishment. It must be borne in mind that a portion of the price of every article of necessity or luxury is composed of the cost of transporting it from producer to consumer; and consequently, that every reduction in this cost must produce a corresponding reduction in the price of the article transported. Should this portion be considerable in relation to the whole price of the manufactured article, it would be no difficult matter to demonstrate that its market value would be proportionably lessened; and as lessened, that its consumption would be proportionably increased. This observation is not confined to the home markets, but will likewise apply in its degree to the foreign, giving birth thereby to a spirit of competition, which alone, on either side, can stimulate the inventive genius of the operator to greater enterprize for the palm of mastery and the attainment of excellence.

Another consequence arising from increased cheapness and facility of transport, is a fresh demand for manufacturing population. All manufactured articles, as their uses become known, gradually cease to be regarded as luxuries, and enter more generally into the wants of every-day life. To meet the increased consumption necessarily attendant on this state of things, an increased number of operators must be employed; and this, in its reaction on the agricultural interests, will produce an extended market for that species of produce. Indeed, the benefit to the agriculturist is far greater than to the manufacturer; because the proportional expense of transporting all productions of the soil is much greater than that of transporting those of the loom, and in many instances enters so largely into its whole price as to preclude its cultivation, except for domestic purposes. To the agriculturist, therefore, it becomes a matter of still higher import that such means be devised as will place him on a more equitable footing with his more fortunate neighbors; and to this end he should, before the tide of prosperity has entirely run out and left him a prey to want, in some unfriendly shoal, direct his remaining energies to the accomplishment of such improvements of intercourse as nature and art may have placed at his disposal.

It is disagreeable to anticipate even in thought what might be the result of a continued deprivation of these facilities to any community, where indolence has taken the place of industry; and vice and misery, its usual concomitants, have breathed their pestilential influence over the notions of its members. Many a melancholy picture might be adduced in illustration from the experience of other countries, at the bare relation of which the heart of the philanthropist would sicken in sorrow; and many a parallel might have been deplored as a curse to this happy country, had not the soaring genius of a Clinton, in defiance of the vulgar prejudices of the day, predicted and finally executed a work that will command the admiration of ages, and stand a cenotaph to perpetuate his name to a grateful posterity. F.

New-York, 10th Nov. 1833.

Specification of the Patent granted to Joseph Saxton, *of Sussex street, in the County of Middlesex, Mechanician, for Improvements in Propelling Carriages, and in Propelling Vessels for Inland Navigation.* Dated June 20, 1833. [From the Repertory of Patent Inventions.]

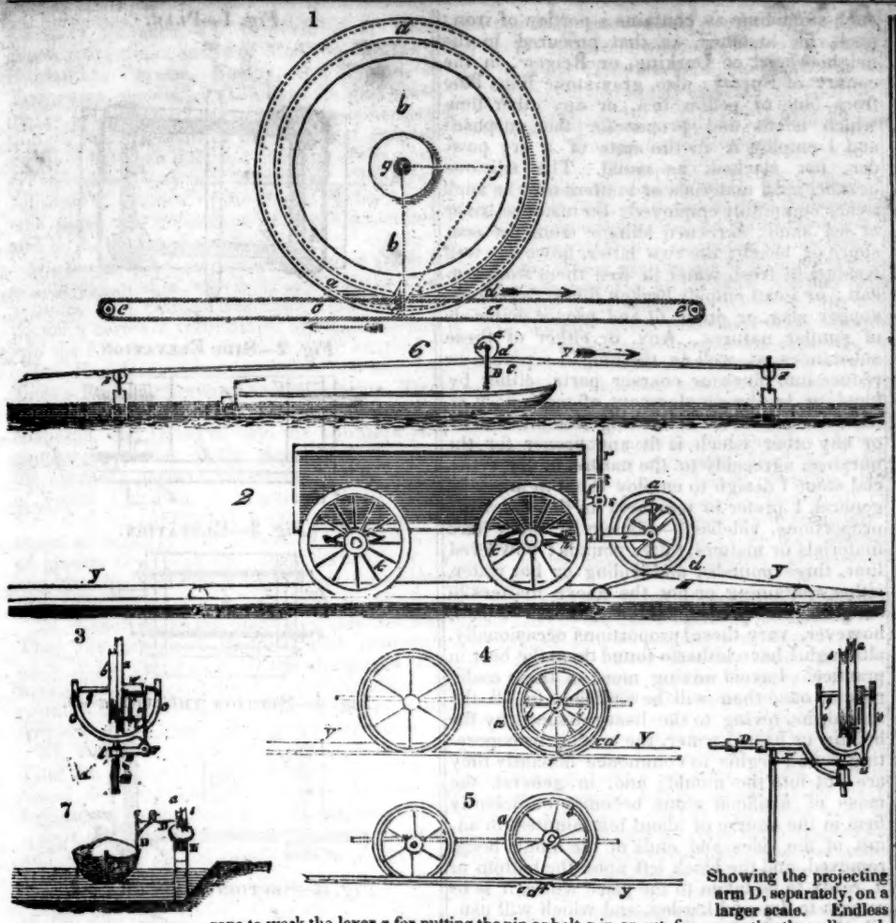
To all to whom these presents shall come, &c. &c.—*Now know ye*, that in compliance with the said proviso, I, the said Joseph Saxton, do hereby declare the nature of my invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following description thereof, reference being had to the drawing hereunto annexed, and to the figures and letters marked thereon, that is to say,

My invention consists in the application of pulleys of different diameters, which I denominate "The Differential Pulleys," or of a pulley and wheels, according to the principles hereafter described, whereby I am enabled to take advantage of the results which are obtained from such difference of diameter, by obtaining considerable velocity to carriages, or to vessels used in inland navigation, whilst the rope by which the motion is produced is caused to act through a very small space, in proportion to the distance travelled by the carriage, or by a vessel used in inland navigation, as will be fully described hereafter, when I come to describe the various figures shown in the drawing. But in order that my invention may be most fully understood, it will be desirable, in the first place, to go into a short description of the principles on which my improvements act, before I describe their application to carriages, and to vessels for inland navigation.

Fig. 1 represents a combination of two pulleys, their diameters being as six to seven, *a* being the larger pulley, and *b* the smaller one. *c d* is an endless rope, passing over the sheaves *e e*; and it should be observed, that this endless rope takes a turn around each of the pulleys, *a* and *b*; that is to say, the part *c* taking a turn around the larger pulley *a*, and the part *d* taking a turn around the smaller pulley *b*. If then the rope *d* be caused to move in the direction of the black arrow, (the upper one,) it will have a tendency to draw the lower part of the pulley *b* in the same direction with the rope *d*, meanwhile the part *c* of the endless rope will be moving in the direction of the dotted arrow, (the lower one,) and will have a tendency to move the lower part of the pulley *a* in the same direction with this part of the rope; consequently, the two pulleys *a b*, (they being fixed together,) would turn on the mean point *f*, as a fulcrum. *g* is the centre of the two pulleys. Let it then be supposed that the part *d* of the endless rope be moved from *h* to *i*, it will be evident that the centre *g*, of the differential pulleys, *a b*, would be moved to the point *j*; and, consequently, if any object were connected to the centre *g*, of these differential pulleys, it would be propelled from *g* to *j*, by the endless rope, *c d*, being moved the much smaller distance of *h* to *i*, as is clearly indicated by the dotted lines, and these distances will be as thirteen to one.

Having now shown the principles on which the differential pulleys act, the various applications hereafter described will be readily understood. And I would observe, that in all the other figures in the drawing, the same letters of reference will be used to indicate similar parts, wherever they occur.

Fig. 2 represents my improvements applied to a carriage, the construction of which is represented to be an omnibus for the carriage of passengers; but it is evident the description of carriage is immaterial, and will vary to suit the purposes to which the carriages are to be applied. The carriage is placed on four wheels, as usual, two of which wheels, *k*, *k*, are shown in this figure. *a*, and *b*, are the differential pulleys, applied to the carriage according to my invention, *a* being the larger pulley, and *b* the smaller one. These pulleys are placed on an axis *g*, see fig. 3, which represents the pulleys, together with the parts in which they are placed. *m* is an arm or frame, which carries the differential pulleys, and which is fixed to the carriage, as shown at fig. 2: the arm *m*, being cylindrical, and capable of turning in bearings, *n n*, affixed to the carriage. The object of this turning of the arm *m*, is to permit the pulleys *a*, *b*, to stand at an angle, by which the endless rope may be led into the sheaves, when the carriage is going in a curved direction. The projecting arm *m* is forked at the outer end, as shown in figs. 2 and 3, at *o o*; and the forked ends serve as bearings to the axle *g*, of the differential pulleys, *a* and *b*, the pulley *a* being per-



Showing the projecting arm D, separately, on a larger scale. Endless rope to work the lever *r* for putting the pin or bolt *q* in or out, for connecting the pulhes *a b*. *y y*, endless rope—*z z*, sheaves.

manently affixed to the axle *g*, whilst the pulley *b* is capable of turning loosely on this axis, when it is not retained by the pin or bolt *q*, which locks the two pulleys, *a* and *b*, together at the times required, and thus they are at such times the same as if they were permanently attached to each other; the object of thus having the means of disconnecting the two pulleys, *a* and *b*, is, that by disconnecting them, the power will no longer tend to drive the carriage, as will be fully described hereafter. *r*, fig. 2, is a lever, turning on a fulcrum *s*, the bearing of which fulcrum is attached to the carriage. The upper end of this lever, r, is formed into a handle, and is in such a position, that a person sitting in front of the carriage may have it under his control; the other end of the lever *r*, that is, the part below the fulcrum, has a crotch, which receives the flanch *t*, of a sliding-socket *t*, within it, as shown in fig. 2: this socket slides on the arm *m*, according as the lever *r* is moved out from, or drawn towards, the carriage. *u*, is a cranked or bent lever, having its fulcrum at *v*, on the forked frame *m o*, as shown in fig. 3. One end of this cranked lever *u* has a crotch, which receives the flanch *t*, of the sliding socket *t*, see fig. 3; and the other end of the bent or cranked lever *u* has also a crotch therein, by which it is enabled to slide the socket *w*, on the axis *g*, backwards and forwards. *x*, is an arm, affixed to the sliding socket *w*, through which the bolt or pin *q* passes, and this pin or bolt passes through one of the spokes of the wheel or pully *a*; and when it protrudes beyond the pulley *a*, it passes between the spokes of the pulley *b*, and, consequently, when the pin or bolt *q*, comes in contact with one of the spokes, or the part of the inner rim of the pulley *v*, which is cut away (as shown in fig. 2) for that purpose, the two pulleys will be held securely together. On the bolt *q* is placed a spiral spring, its object being, that in case the lever *r* be moved for the purpose of forcing in the bolt *q*, at a time when it is not opposite the part of the inner rim which is cut away, the spiral spring will have a tendency to force in the bolt, yet at the same time will not offer sufficient resistance to prevent the turning of the pulley, and the bolt *q* will be forced in, when the part of the pulley where it is cut away comes opposite to the bolt; at the same time there is a spring to prevent a sudden concussion.

In fig. 2, *c d* is an endless rope, the part *c* taking a turn around the pulley *a*, and the part *d* taking a turn around the pulley *b*, as described in fig. 1. This endless rope is supported, at proper intervals of the road, on sheaves (as shown in fig. 2,) to prevent the rope falling on the ground, and thereby greatly increase the friction; this endless rope passes around a rigger at each end, by which the rope is kept sufficiently tight; but to insure the endless rope being kept sufficiently tight, I cause one of the riggers around which the rope passes to be placed in bearings capable of being slided in the direction of the length of the railway on which the carriage travels, and then, by means of weights attached to a rope or chain, and passing over a pulley affixed at the top of a well, and having sufficient weights attached to keep the endless rope, *c d*, sufficiently tight to prevent it sliding on the differential pulleys, *a b*.

Having now described the various parts shown in figs. 2 and 3, I will proceed to describe the manner of their action; in doing which, I will suppose the bolt or pin is passed through the two pulleys, *a* and *b*, and thus retains them together, as if they were permanently fixed to each other. If, then, the endless rope *d* be moved in the direction of the arrow, a similar action will take place to that described in fig. 1, that is, the carriage, being attached to the centre *g*, of the differential pulleys, *a* and *b*, will be propelled forward on a railway with a much greater velocity than the rope travels; and the distance so travelled by the carriage, in comparison with the distance through which the rope moves, will depend on the difference of the diameters of the pulleys, *a b*; and the nearer the respective diameters of the pulleys approach each other, the greater will be the relative velocity the carriage will travel, to the velocity with which the rope moves.

In order to prevent the two parts of the rope rubbing against each other, in leading on and off the differential pulleys, the axis *g* of these pulleys is placed at an angle, a little varying from a right angle with the direction of the motion of the carriage.

Figs. 4 and 5 show two applications of my improvements, but in these figures the applications somewhat vary from that shown in fig. 2; for in these instances there is only one pulley, whilst the two front or two back wheels of the carriage act the part of the other pulley.

In fig. 4, *a* is one of the front wheels of the carriage, which also acts as the larger pulley; *b* is the smaller pulley, and is the only one around which the rope, *c d*, passes. The wheels *a*, and the pulley *b*, being on the same axis *g*, which runs from side to side of the carriage, and turns in bearings affixed to the carriage.

In this arrangement, the point *f*, at which the wheels touch the rail, becomes the fulcrum on which the wheel *a* turns; and it will thus be evident, that if the rope, *c d*, be drawn forward, in the direction of the arrow, a similar effect will be produced, as described in fig. 2, and as is clearly shown by dotted lines in fig. 4; yet, at the same time, if the wheels and pulleys, *a* and *b*, be of the same relative diameters as those in fig. 2, the carriage at fig. 4 would only be propelled at the velocity of seven to one, owing to the fulcrum, at which the wheels *a* turn, being removed from the main point *f*, fig. 2, between the two diameters, and placed at the extreme end of a radiating line, drawn from the centre of the wheel *a*, to the point at which it touches the railway.

In fig. 5, the rope passes around the pulley *a*, which is larger, whilst the carriage-wheels act the part of the smaller pulley *b*. The pulley *a*, and the wheels *b*, being on the same axis *g*.

In order that the pulleys in this arrangement may stand at an angle for clearing the rope, the axle *g*, is formed of three parts, connected by universal joints, and one of the wheels *b* thus travels a little forwarder than the other, and thus the rope will clear itself. And it should be observed, that in both these arrangements, the pulley around which the rope passes is to be made capable of being disconnected from revolving with the axle, as described in figs. 2 and 3. In the arrangement, fig. 5, the fulcrum *f*, on which the wheels turn, is the point at which the wheels *b* touch the rail or road; and the difference in the arrangements figs. 4 and 5, is, that the power in fig. 4 is applied by the rope between the fulcrum *f*, and the centre *g*, of the wheels or pulleys, *a b*, where the weight to be drawn is attached; whilst in fig. 5, the fulcrum is between the centre of the pulley and wheels, *a b*; consequently, the arrangements differ in the order of leverage, and in this instance the velocity will be as six to one.

In these two last arrangements, the rope, *c d*, may be either an endless rope, as described in figs. 1 and 2, or the rope may be single, and taking a turn around the pulley *a*, or *b*, is to be wound on and off a drum at each end of the distance, which is to be run by one length of rope.

Having now described my improvements, as applicable to the propelling of carriages, I will proceed to describe their application to the propelling of vessels in inland navigation. This application is an arrangement similar to that shown and described in figs. 2 and 3. A representing a canal barge or boat, having an upright standard B, affixed on one side thereof, see figs. 6 and 7; at the top of this standard, the bearings, *c c*, are formed to receive the projecting arm D: in other respects the parts are similar to fig. 2, and the same letters are used to denote the various parts.

At proper intervals sheaves are placed on standards at the side of the canal or river, to support the rope *c d*, as shown in these figures. In propelling vessels, the same description given of figs. 1 and 2 applies, and is fully de-

scriptive of the effect which takes place by the application of my improvements.

Having now described the nature of my invention, and the manner of constructing and applying the same, I would observe, that the power to be employed for causing the rope, *c d*, to be moved, may be varied according to circumstances. Thus, for instance, by attaching a horse or horses, according to the power required, to the rope, *c d*, and causing it to move slowly, a very considerable velocity will be obtained; or the power may be derived from a fixed steam engine, or water-wheel, or manual labor. And in order to have perfect control over the carriage or vessel, and be enabled to stop at any time, although the rope is continuing to move, it will be necessary to separate the two pulleys, *a b*, by withdrawing the pin or bolt *q*; the power will then no longer act to propel the carriage or vessel, and, consequently, there will only be the momentum already obtained, by the carriage or vessel, to be overcome, and this in a carriage may be effected by aid of a brake on any of the carriage wheels, *k*.

Having now fully described the manner of applying and using my invention, I would have it understood, that I lay no claim to the parts separately of which the same is composed; and I would observe, that some of the details may be varied to meet the various circumstances to which works of this kind are at all times liable, but which will be readily arranged and adopted by any engineer competent to undertake works of the like nature. And I would further observe, that I am aware that endless ropes, as well as drag-ropes, have been before known and used for the purposes of propelling carriages and vessels, but in such cases the carriage or vessel travels only at the rate of speed with the rope; therefore, the use of an endless rope or a drag-rope forms no part of my invention, and are only necessary means for effecting the object of my invention, as above described. And I do hereby declare, that I confine my claim of "Improvements in propelling Carriages, and in propelling Vessels for Inland Navigation," to the application of the differential pulleys, or of a pulley and wheels, *a b*, for propelling carriages and vessels, as above described, whereby I am enabled to take advantage of the results which are obtained from the difference of their diameters, and thus obtaining considerable velocity to such carriages and vessels, whilst the rope by which the motion, of the carriage or vessel, is produced, is caused to act through a very small space, in proportion to the distance travelled by the carriage or vessel, as above described.

In witness whereof, &c.

Specification of the Patent granted to WILLIAM RANGER, *of Brighton, in the County of Sussex, Builder, for a Cement or Composition, which he denominates "Ranger's Artificial Stone."* Dated June 4, 1833. [From the Repertory of Patent Inventions.]

To all to whom these presents shall come, &c. &c. *Now know ye*, that in compliance with the said proviso, I, the said William Ranger, do hereby declare, that the nature of my said invention, and the manner in which the same is to be performed, are particularly described and ascertained in and by the drawing hereunto annexed and the following description thereof, that is to say:

My said cement or composition is intended, as above mentioned, to form blocks or masses of artificial stone, to be used in the construction of buildings, in place of brick or stone, or in union with either or both of them, as occasion may require; and I compose it of silicious or other fit and proper, hard and unchangeable matters; of powdered lime in its pure or caustic state; and of water boiled or heated; and which said water I employ as hot as conveniently may be, in mixing the different ingredients. I likewise occasionally dissolve a portion, more or less, of sulphate of iron in this water, as well also as caseous and other matters, when thought desirable. I prefer to use such stone-lime as contains a portion of iron; such, for instance, as that procured in the neighborhood of Dorking, or Reigate, in the county of Surrey; also, gray-stone lime, lime from blue or yellow lias, or any other lime which is fit and proper for the purpose: and I employ it in the state of a dry powder, not slacked, as usual. The silicious or other hard materials or matters may be such as are commonly employed; for instance, river or sea sand; skreened shingle from the sea-shore or beach; the two latter, however, well washed in fresh water to free them from sea-salt; or I can employ broken flints, free-stone, copper slag, or other fit and proper materials of similar natures. Any, or either of these substances, as well as the lime, I separate or reduce into finer or coarser parts, either by hand, or by the employment of machinery similar to that used in making Roman cement, or any other which is fit and proper for the purpose, agreeably to the nature of the artificial stone I design to employ them to form. In general, I prefer to use them in the following proportions, videlicet,—silicious or other hard materials or matters, thirty pounds; powdered lime, three pounds; and boiling or hot water, either containing or not the above matters in solution, one pound twelve ounces. I can, however, vary these proportions occasionally, although I have hitherto found them the best in practice. I avoid mixing more of these materials at once than will be sufficient to fill the mould, as, owing to the heat produced by the boiling or heated water, the setting or concreting action begins to commence instantly they are put into the mould; and, in general, the mass of artificial stone becomes sufficiently firm in the course of about ten minutes, to admit of the sides and ends of the mould being removed, and the block left upon the bottom of it, ready to be taken to the place where it is to remain to dry and harden, and which will usually happen in the course of a fortnight, when the block or mass will be fit for use. I cause the materials to be carefully rammed close in all their parts, whilst filling the mould with them, in order to expel the air; and remove any excess thereof by passing a straight iron bar or scraper along the top of the mould; I can, then, likewise, when thought desirable, fill any interstices or cavities left in the face of the block, with materials of a finer consistency. The moulds will, of course, vary in their forms and manner of framing them, according to the shapes intended to be given to the masses or blocks of artificial stone; as, for instance, whether they are to be plain, or moulded in flutings, or otherwise ornamented or decorated; or whether to be square, circular, or of any other shapes, so that it is quite impossible to afford examples to any extent. As, however, it may be desirable to give some idea of their construction, I shall proceed to do so by describing the several figures contained in the drawing, which, as aforesaid, is annexed to this specification, and which represents the various parts of a wooden mould intended to form plain oblong blocks of artificial stone, each part being designated by a similar letter of reference in all the figures. *e* is the bottom of the mould, resting upon and strengthened by the two cross-pieces, *f f*. *g g* are the sides of the mould, each having two upright grooves formed in it, as shown at *h h h h*, in the plan, fig. 1, to receive and retain the ends *i i* of the mould in their proper situations. These sides and ends are held together by means of four iron bars *j j j j*, whose ends are bent at a right angle, so as to form clamps, as shown in fig. 1, between the inner ends of which said clamps and the sides of the mould wooden wedges may be tightly driven, to hold the mould together in use, and be as easily removed again when it is to be taken asunder. There are also two wooden ledges *k k* affixed upon the bottom of the mould, as shown in the end section, fig. 5, to retain the sides and ends of it steadily in their places upon it in use.

Fig. 2 is a side elevation, and fig. 3 an end elevation of the mould; and fig. 4 is a side elevation and section of it, taken at the dotted line *a b*, in fig. 1.

Fig. 1—PLAN.

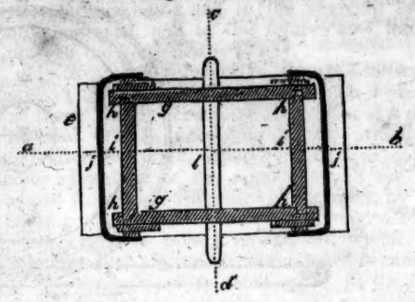


Fig. 2—SIDE ELEVATION.

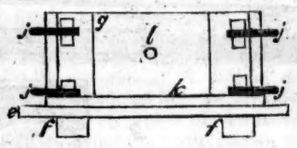


Fig. 3—ELEVATION.

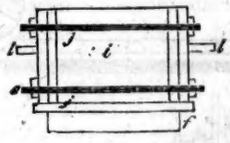


Fig. 4—SECTION THROUGH *a*—*b*.

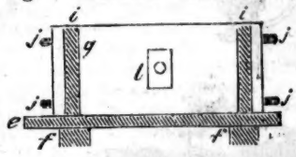


Fig. 5—SECTION THROUGH *c*—*d*.

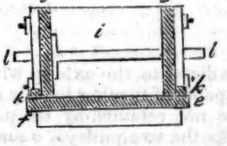


Fig. 5 being an end elevation and section, taken at the dotted line *c d*, in fig. 1. *l*, in all the figures, is a bar passed through holes made in the sides of the mould, to form a hole through the block of artificial stone. I prefer to place the blocks or masses of my artificial stone in the open air to harden, and even to wet them occasionally during that operation.

I do not mean, or intend hereby, to claim as my invention, the use of hot water in mixing mortar for building with; but I do hereby claim the employment of boiling or hot water in combination with dry powdered caustic lime, and silicious or other hard matters, in the manner and in the proportions hereinbefore described, as my invention, and as essential to the forming of my said blocks or masses of artificial stone.

In witness whereof, &c.

GREAT SOUTHERN RAILROAD.—The following is taken from the National Intelligencer. It indicates a proper feeling on the part of the inhabitants of that section of Tennessee, bordering upon the river and State of Mississippi. There can be little doubt that great and lasting benefits would result to the south-western States from the construction of a railroad from Charleston to the Mississippi, on or near the route indicated. Indeed, it would not be saying too much, to say that the country would in ten years increase in wealth to at least twice, and probably to three times, the cost of the road, even if it should cost $10,000,000.

GREAT PROJECT.—A Convention of Delegates, from the counties of Madison, McNairy, Hardeman, Fayette, Shelby, and Tipton, in Tennessee, assembled at Bolivar, in that State, on the 14th of October, to take into consideration the improvement of the means of communication between different sections of the county, in which they are interested. Maj. Gen. Edmund P. Gaines, of the United States Army, was appointed President of the Convention, and R. A. Parker, Secretary.

On the 15th, a Committee, appointed the preceding day, and of which, by order of the Convention, Gen. Gaines was made Chairman, reported a series of resolutions, of which we subjoin the five first, all of which were adopted:

1st. Resolved, as the opinion of this meeting, That a Railroad between the Mississippi River and the Atlantic Ocean, to pass through the Alabama, and Georgia, and the southern part southwest border of the State of Tennessee, the notrhern parts of the States of Mississippi, of South Carolina, is *practicable* and *desirable;* that its anticipated local benefits and national advantages may reasonably be estimated as greatly to exceed the whole expense of its construction, and that it ought to be commenced forthwith.

2d. Resolved, as the opinion of this meeting, That the proposed Railroad will contribute more in ten years time, by the cheapness of its means of transportation of merchandize and country produce, than will be sufficient to defray the whole expense of its construction.

3d. Resolved, as the opinion of this meeting, That the proposed work, as a measure of *national defence*, would contribute more, by the facilities it will afford in the transportation of troops and munitions of war, to the protection and security of the southeastern States and East Florida, than all the fortifications constructed or designed to be constructed, south of the Chesapeake Bay; for it is obvious to every man of military mind, that the strongest fortifications must depend mainly for defence and preservation on prompt and seasonable supplies of *fighting men*, with arms and subsistence; and that these cannot be promptly wielded from the interior to the frontier, without good roads, railways, canals, or large navigable streams, and a railway will cost much less than a Macadamized road.

4th. Resolved, as the opinion of this meeting, That the proposed Railroad, in a political point of view, will be found to be one of the strongest links in the chain of the *union* of the twenty-four States.

5th. Resolved, as the opinion of this meeting, That —— be appointed a Committee, whose duty it shall be, by sending memorials to Congress, and to the Legislatures of the several States mentioned in the fourth resolution, and by such other means as they shall deem expedient to carry into effect the foregoing resolutions, and they are hereby especially authorized respectfully to request the President of the United States to direct an officer of the corps of Topographical Engineers to make the requisite surveys and estimates, preparatory to the commencement of the proposed Railroad.—[Nat. Intel.]

Tow Boat.—The charge for towing the ship St. Louis up to Natchez, was thirteen hundred dollars.

[*From the New-York American.*]

THE ACCIDENT ON THE AMBOY AND CAMDEN RAILROAD.—The explanation which the company owning this road have made in the address we publish today, proves, as it seems to us, conclusively, that the fatal accident of last week was one of those occurrences which scarcely any human foresight or caution can guard against. It is satisfactory to find that, so far as strict vigilance, and all proper means of enforcing attention to the safety of passengers, and the regulation at a due speed of the carriages, are concerned, this company are free from reproach. No mode of conveyance is exempt from accident, or can be made so; but we do not hesitate to express the belief, that steam conveyances, whether on land or water, will be found, reference being had to the numbers they transport, vastly less hazardous than the dullest stages or the surest sailing vessels.

Address of the Camden and Amboy Railroad and Transportation Company.

TO THE PUBLIC.

The unfortunate accident which occurred on the road on Friday last, and the melancholy consequences resulting from it, have occupied the most serious attention of the Executive committee of the Board of Directors. Every exertion has been made to obtain a correct statement of all the facts, that they might be disclosed to the public.

The security of the passengers from the commencement of the operations of this company, has been an object of the first consideration. For several weeks after a sufficient number of locomotives to carry the passengers, were completed, and on the line, the horses were continued, notwithstanding the importunity of the public for the change. The most unfounded reports as to the capacity of the road for the use of this species of power, were circulated and believed from this delay. During all this period, however, the engines were constantly in use, when the line was free from the passenger cars, in transporting merchandize and materials on the road.

The Directors preferred the odium attached to their delay to the risque attending the substitution of the engines until the engineers had become familiar with their use. They were then placed on one line only, that they might be under the immediate superintendance of confidential agents of the Company. Positive instructions were given that the trip [35 miles] should not be made in less than two hours and a quarter; allowing two hours, or a speed of seventeen and a half miles per hour, for the actual running of the engine, and fifteen minutes for the necessary stoppages. Special instructions were also given that no one mile should be run in less than *three minutes*. To ensure a compliance with these orders, an agent was placed on each line, whose *special* and *only* duty is to take the time of running each and every mile, with a stop watch, for the government of the engineer, and to note down the same, and report to the Executive Committee. From the commencement these reports have evinced so nearly a compliance with the orders as to be entirely satisfactory. From a careful inspection of the reports of the week immediately preceding the accident, it is discovered that the time actually occupied in running, shows an average rate of eighteen miles per hour, and the fastest trip was at the rate of 19 miles. Unfortunately the time keeper of this line had sustained a slight injury from a fall a day or two previous, and was not then on the line. As the engineers had become so well regulated in their time, it was deemed unnecessary to procure another agent to fill this temporary vacancy.

Had this officer been at his post, the first subject of inquiry, to wit: the rate at which the cars were running, would have been attended with no difficulty. From the excitement naturally produced by the disaster, it has been found impracticable to obtain accurate information on this subject. The committee are led to the conclusion, however, that a short time before the occurrence of the accident, the speed of the engine had considerably exceeded the rate allowed, but that at the time and immediately before, this was not the case. This opinion is induced by the following facts:

There were two trains of cars attached to separate engines. The accident happened to the last train. The first engine is the least powerful on the line. The engineer is positive that so far from being in advance of, he was behind his time. He moreover states that from inadvertence his fire had got down and his steam was so low as to render it difficult to maintain his proper speed at that point, as the road there ascends. The committee are satisfied that the orders had not been materially violated as to the whole time of running the distance.

But it appears that owing to some trifling derangement of the second engine, the engineer, about three miles before, had reduced his speed to adjust it. After doing so, he states that to recover his proser station he increased his speed, but not in his opinion exceeding his limited rate. In this he was probably mistaken. But before the accident occurred he had checked the engine by shutting off a considerable portion of the steam, and is positive that he was not then running faster than the train in advance. This declaration is strongly corroborated by the fact, that one of the agents accompanying the line was on he top of the car which upset, and jumped from it to ground *without injury*, when he discovered that it was going over. From the place where he alighted to that where the car rested after the train was stopped, is not quite 21 yards.

The accident has also been attributed to the heating of the axle from friction for want of oil. It is understood that some of the passengers are under the impression that they saw smoke from this cause. This is clearly a mistake. The axles were examined at Spottswood, (not eight miles distant) by the agent whose duty it is to do so, and found perfectly cool and well supplied with oil. The appearance of the fracture is entirely inconsistent with this idea, and the quantity of oil still adhering to both the journal and box is conlusive, as that would have been entirely consumed by the heat.

These matters have been adverted to particularly, because the accident has been attributed to them, and the committee have felt bound to afford every information on the subject. They are convinced, however, that it is to be traced to other causes which could neither have been foreseen nor prevented, and that the fatal consequences were produced by a combination of circumstances that have never before occurred and in all human probability will never again occur.

Cast iron wheels have been entirely excluded from the passage cars on this road. The axles have all been procured from Boonston the most celebrated works in the country, at the exorbitaut price of $125 per ton to ensure the quality of the iron. They are more than 50 per cent. stronger than those used for the passage cars of the Liverpool and Manchester road, and for still greater security the ends were all welded down before they were turned. Yet with all these precautions it appears by an examination of the broken axle that a latent defect existed in it which caused the accident. There was a flaw in it leaving not more than three eighths of the strength of the iron to sustain the whole weight, but as the defect was in the journal it was effectually concealed. This was the primary cause of the calamity. But the breaking of the axle would have been harmless as none of the passengers in that car received the slightest injury. It remains only to account for the injury to the other car.

It has been supposed the car was thrown from the track and upset by running over the wheel of the broken car. This is entirely an error. The axle broke in the journal, outside the wheel, so that both wheels remained attached to the axle, which at one end maintained its proper position, but at the other, having nothing to sustain it, dropped into the receiver, so that the spokes and the hub, which were of wood, were brought in collision with the iron on the frame, and nearly half of them splintered to pieces by the revolutions of the wheel. It has been this which was mistaken by the passengers for the *smoke of the axle*.

An agent is always stationed at the brake of the baggage car to keep a constant watch upon all the other cars, and to apply the brake and instantly apprise the engineer if any accident occurs. For the first time since the line has been in operation a spark had lighted on the baggage car, and ignited a bundle of cotton. The agent discovered this, and was in the act of extinguishing it when he discovered the breaking of the axle. Before he could recover his station and apply the brake, the car was thrown from the track, and so far over as to be beyond recovery. There is no doubt but that the impetus from the after cars caused the overthrow of this car. It is evident that it must have been projected forward by them and thrown on the front end, from the fact that of the twenty-four passengers in it at the time, those in the back apartment were uninjured.

This would have been effectually prevented by the application of the brake, but for the unfortunate mischance which drew the agent from his post at that critical juncture. No blame appears reasonably to be attached to the agent, as the train was then running on a portion of the line where there is a double track and perfectly straight for nearly six miles without even a turn-out to guard against.

These are the facts and conclusions arrived at after the most careful examination of this painful subject. Whilst the committee deeply deplore the event and sympathize with the unfortunate sufferers and their friends, they have to console themselves with the conviction, that the company cannot justly, be chargeable with the censure of the public. It is believed that in no similar enterprize, greater care has been taken to protect the passengers from injury, and that their intentions have been frustrated by an extraordinary combination of circumstances, not to have been foreseen or prevented by human foresight.

J. H. SLOAN, *Secretary.*

Effects of Burying Iron and Steel in the Earth. By JUNIUS REDIVIVUS. [From the London Mechanics' Magazine.]

SIR,—Some of the principal physical agents in the furtherance of human happiness being metals, and, amongst those metals, iron taking the foremost place, I was much gratified by reading your extract from the *Chronicles of Old London Bridge*, which seems to open some new views as to the further improvement of our national manufacture. But there is some obscurity in the statement of the circumstances, which it would be well to have cleared up, if possible, for the advantage of the experimentalists who may be inclined to trace the matter up to its causes, since 'this effect effective must come by cause.'

It seems that the burying of either steel or iron in the earth, for either 'three years,' or 'six or seven hundred years,' causes a decided improvement in its quality. Of what nature the improvement was, in the case of the razors which were buried, we are left in ignorance; but it seems that the change must have been wrought by an operation of natural chemistry, either taking something from the metal, or adding something to it, or both, by the process of chemical affinity. I should be led to imagine that both circumstances had taken place, as it is stated that, though a coat of rust had gathered on the razors, they were not eroded: that is, had sustained no loss of substance. The process would then be perfectly analogous to what is called the petrifying of wood, or other organized substances, wherein, as the organized matter decays, a deposit of lime assumes the same form. To get at the complete facts, we ought to know—first, the chemical analysis of the razor blades when first buried—secondly, the analysis of the 'earth' in which they were buried—thirdly, the analysis of the razor blades when they were again dug up—and, fourthly, wherein the improvement consisted, or what new qualities were acquired by the steel. Mr. Weiss would render a great service to science and art by stating these particulars as far as his experience enables him, if, indeed, it were not interfering with his profits as a manufacturer, to make his secret known. This no man can be called upon to do, unless for specific remuneration. But I take it for granted, that the author of the *Chronicles* states the *facts*, and that they are not of a piece with the proposition of the gardeners, that 'melon seeds should be worn some years in the breeches pocket previous to planting.'

In the case of the pile-shoes of London Bridge, which were of iron, a change took place in the straps which were in contact with the charred timber, and not in the solid points. This is a different case from the steel which was buried in the 'earth;' yet both the iron and the razor blades were *improved*, though the circumstances were different. A supposition is given, that, in the case of the iron, the change was wrought by galvanism. Very possibly; but it would be for the interest of manufacturers and the public to know it more certainly. 'Improvement,' and 'earth,' are far from definite terms, and a variety of chemical distinctions may be comprised in them. The object sought for is to effect, by the chemistry of art, in a short space of time, that which takes the chemistry of nature 'three years,' or 'some six or seven hundred years,' to accomplish. Are there yet data enough to work by? If not, they should be sought; and by careful inquiry and experiment, that would be made a matter of common knowledge which is at present a matter of uncertainty.* I have understood that your correspondent, Mr. Rutter, is one of the favored few possessing the rare combination of pecuniary means with public spirit. Surely the experiments I have endeavored to indicate offer a worthy field for the exercise of his talents. Yours, &c. JUNIUS REDIVIVUS.

* In almost all our metallic manufactures, mechanism is in advance of chemistry. The latter science has never yet been properly pursued as a whole, by a united body of men, but is indebted for its progress to the energy of individuals, who have from time to time devoted themselves to it, principally at their own cost, and the public at large have benefited by their 'labor of love.'

Effects of Burying Iron and Steel in the Earth. [From the London Mechanics' Magazine for May.]

SIR,—I very much doubt whether we possess sufficient information to warrant the conclusion, that burying iron and steel in the earth "causes a decided improvement in its quality."

It is a subject that well deserves minute investigation. I think, however, it belongs to the practical worker in these metals, rather than the experimental chemist, to make the necessary observations. The chemist may be able to analyse a piece of metal, and to ascertain with tolerable accuracy of what materials it is composed;* but he will give very little useful information as to its utility, unless he be assisted by the experience of the man who forges, and tempers, and sharpens the specimen, and thus exemplifies its peculiar properties.

That chemical changes are constantly going on in the vast and magnificent laboratory of nature, cannot, as I conceive, be denied. We must, however, bear in mind, that the chemistry of nature seems evidently designed to prepare materials for the chemistry of art to operate upon, and not to supercede the art itself.

The pile-shoes of London Bridge ought not to be cited as illustrative of a beneficial change by simply burying them in the earth. When those pile-shoes were forged, iron was a comparatively scarce metal. The small quantities of ore that were smelted in that day imply a careful and protracted process, evidently conducted under a variety of disadvantages as respects quantity, yet involving, perhaps, some of the most favorable conditions relative to quality.

The superiority of the straps that were in immediate contact with the charred surfaces of the piles, seems to indicate a process somewhat analogous to the cementation of iron in forming it into steel, by its combination with carbon. Yet, after all, may not this part of the shoe be that which had retained its original peculiarity, whilst that not in contact with the charred surfaces had become deteriorated by the soil in which it was imbedded?

It is to be feared that practical men, in the various departments of science to which they belong, are not sufficiently attentive to the phenomena that are constantly inviting their observation. Those of them who possess discernment enough to distinguish between things that differ, generally keep their own secrets. They are fully justified in doing so, whilst the present system of plundering and appropriating prevails in the scientific world. There is no very great encouragement for a poor man to communicate what he knows, merely to see others enriching themselves by the results of his unacknowledged, unappreciated, and unrewarded labors.

Your valuable correspondent "Junius" has said more of me than I deserve: were my means proportionate to my wishes, and I trust they are not immoderate, I should, perhaps, do more than I can at present. A young family, and a tolerably extensive business, justly demand of me the greater portion of my time and attention. A few moments of occasional leisure are all that I can spare to science; but those few moments always leave behind them a reward more satisfying and more enduring than either wealth or honor can confer.

I am, &c. J. O. N. RUTTER.

April 30, 1833.

* The chemist who can do this must be more expert than a "Lecturer on Chemistry," of whose performances in the analytical way I have lately heard an amusing account.

BIRDS AND INSECTS.—There cannot be any question of the immense number of insects required by birds during the breeding season. It is stated by Bingley, that a pair of small American birds, conjectured to be the house-wren, were observed to leave the nest and return with insects from forty to sixty times in an hour, and that in one particular hour they carried food no fewer than seventy-one times. In this business they were engaged during the greatest part of the day. Allowing twelve hours to be thus occupied, a single pair of these birds would destroy at least six hundred insects in the course of one day, on the supposition that the two birds took only a single insect each time; but it is highly probable that they often took more.

Looking at the matter in this point of view, the destruction of insectivorous birds has in some cases been considered as productive of serious mischief. One striking instance we distinctly recollect, though we cannot at this moment turn to the book in which it is recorded. The numbers of the crows or rooks of North America were, in consequence of state rewards for their destruction, so much diminished, and the increase of insects so great, as to induce the state to announce a counter reward for the protection of the crows. Such rewards are common in America; and from a document given by Wilson, respecting a proposal made in Delaware "for banishing or destroying the crows," it appears that the money thus expended sometimes amounts to no inconsiderable sum. The document concludes by saying, "The sum of five hundred dollars being thus required, the committee beg leave to address the farmers and others of Newcastle county and elsewhere on the subject."

From its sometimes eating grain and other seeds, "the rook," says Selby, "has erroneously been viewed in the light of an enemy by most husbandmen; and in several districts attempts have been made either to banish it, or to extirpate the breed. But wherever this measure has been carried into effect, the most serious injury to the corn and other crops has invariably followed, from the unchecked devastations of the grub and caterpillar. As experience is the sure test of utility, a change of conduct has in consequence been partially adopted; and some farmers now find the encouragement of the breed of rooks to be greatly to their interest, in freeing their lands from the grub of the cockchafer, an insect very abundant in many of the southern counties. In Northumberland I have witnessed its usefulness in feeding on the larvæ of the insect commonly known by the name of Harry Longlegs, which is particularly destructive to the roots of grain and young clovers."

It has on similar grounds been contended, that the great number of birds caught by bird-catchers, particularly in the vicinity of London, has been productive of much injury to gardens and orchards. So serious has this evil appeared to some, that it has even been proposed to have an act of parliament prohibiting bird-catchers from exercising their art within twenty miles of the metropolis; and also prohibiting wild birds of any kind from being shot or otherwise caught or destroyed within this distance, under certain penalties. It is very clear, however, that such an act could never be carried; and though it *might* be advantageous to gardens, orchards, and farms, yet the attacks which the same birds make on fruit would probably be an equivalent counterbalance.

In the case of swallows, on the other hand it has been well remarked by an excellen

naturalist, (the Rev. W. T. Bree,) that they are to us quite inoffensive, while "the beneficial services they perform for us, by clearing the air of innumerable insects, ought to render them sacred, and secure them from our molestation. Without their friendly aid the atmosphere we live in would scarcely be habitable by man; they feed entirely on insects, which, if not kept under by their means, would swarm and torment us like another Egyptian plague. The immense quantity of flies destroyed in a short space of time by one individual bird is scarcely to be credited by those who have not had actual experience of the fact." He goes on to illustrate this from a swift, which was shot. "It was in the breeding season when the young were hatched; at which time the parent birds, it is well known, are in the habit of making little excursions into the country to a considerable distance from their breeding places, for the purpose of collecting flies, which they bring home to their infant progeny. On picking up my hapless and ill-gotten prey, I observed a number of flies, some mutilated, others scarcely injured, crawling out of the bird's mouth; the throat and pouch seemed absolutely stuffed with them, and an incredible number was at length disgorged. I am sure I speak within compass when I state that there was a mass of flies, just caught by this single swift, larger than, when pressed close, could conveniently be contained in the bowl of an ordinary table-spoon." —[Library of Entertaining Knowledge.]

AGRICULTURE, &c.

Valuable Manure—New-Jersey Marl. By D. A. Ames. [For the New-York Farmer.]

Mr. Fleet,—I have, according to promise, collected a few facts upon the Jersey Marl, as a manure, and I submit them to you for insertion in the New-York Farmer.

Every person to whom I have applied for information upon this new and valuable article, speaks of it as possessing enriching qualities, truly surprising, and of more general value than any known substance at present in use for that purpose.

Its effect was accidentally brought into local notice about sixteen years ago, by a farmer, who, having a ditch dug in a meadow, had the soil scattered over the piece: the ditch or drain happened to cut a vein of this marl, and the produce of the meadow was three-fold the ensuing season, upon the spot where the marl was scattered. Important as this was, no further notice was taken of it, and being of the old stamp, averse to any thing new, he neglected to profit by his accidental good fortune. That meadow still has a better bottom where the marl was spread. After this I can find no traces of its use till about nine years since, when, by some chance, Mr. Alexander M'Gregor spread a quantity on some grass land; the effect was great, and he informed me that the first crop paid him for the expense in additional hay. That gentleman is now a warm advocate for it, and being a large owner, and a wealthy man, has caused it to be pretty extensively used for these last two years, for all kinds of crops, and he assured me last week, with entire success; yet one or two, who have pits of marl on their premises, still prefer disposing of it to improve other farms, rather than enrich their own. It is now ascertained that this marl forms a substratum in many parts of the Jersey coast, and therefore may be procured to any extent; and I am about to show you that its cheapness, durability, strength, cleanness, &c. will make it a valuable manure for the Long Island market-gardeners and farmers. If they once try it, they will no more buy the New-York manure at 50 cents the carman's load. I am assured by one respectable farmer, that he considers one load of marl equal to five of dung. It is perfectly clean, and will even destroy many weeds. This is a great desideratum in garden truck. It does not readily freeze, and will work well all weathers, always ready for use, and may be spread any time from September to March inclusive. It makes an excellent compost; upon grass land it does wonders; a thick bottom and heavy swarth of white clover is its certain produce. Potatoes, both the sweet and Irish, thrive well with it. Dung, it is known generally, flies into the tops of these, while marl scarcely alters the top, but greatly increases the size of the roots. Corn, buckwheat, cabbages, turnips, all succeed with it.

I am informed that five loads to the acre have produced a fine crop of buckwheat upon very poor land. It is used as a top dressing on grass land, and may be spread from 10 to 20 loads per acre, as late as March. One large farmer, Judge C., informed me he had used 18 loads per acre; but there is some danger of using too much, particularly with poor light land. I have heard of some that was unproductive for five years, but last year it began to recover, and it is expected the produce will eventually make up for lost time, but it is certainly better not to over-do the thing. Give a second dressing the second year rather than a surfeit at first. As far as experimental information enables us to determine, it continues its effects sufficiently nine or ten years. For corn and grain it is scattered on the top after ploughing, and well harrowed in. I cannot learn that it has been tried for peach trees, but I know one large grower who is making preparations to try it this season.

This marl is evidently a marine deposit: it is found in hollows at two or three feet below the surface, continuing downwards to sixteen. Its upper strata is of a greenish blue color, the middle more inclining to grey; and the lowest is of an ash color; this last is considered the strongest. Observe, I speak of its color when dry; and I ought further to observe that other pits are said to vary much in color and quality: therefore, before trial the quality ought to be known. This marl has the appearance of sand, each little grain having a thick coat of decomposed vegetable matter, making them adhere together in lumps occasionally.

Shells, sea-worn stones, sharks' teeth, &c. are often found amongst it. The marl that is found in some places further from the sea does not appear to be so powerful. From the pits where I selected you the sample, that accompany this, it is carted by land 40 miles, the farmer paying from 2s. 6d. to 3s. per load by the pit side. A load is twenty bushels; a bushel weighs from one hundred to one hundred and three pounds, when dry.

I am about having the marl analized, so as to ascertain exactly where it will be most useful. I will communicate to you the result with some other experiments, for your next number; and should you wish to possess a larger sample for any of your readers to make trial with, I have prepared you some in barrels, with the price you can furnish it; for I can see no reason why it should not become an article of as much request as ashes, or plaster of paris, and will, therefore, be of as much commercial importance as coal.

D. A. Ames.

New-York, Sept. 24, 1833.

On the Wine of Seckel Pears. By C. S. Rafinesque. [For the New-York Farmer and American Gardener's Magazine.]

This American Pear is the most delicious fruit of our country; it is different in flavor from any other pear or fruit. I prefer it to the pine-apple and any other fruit, except some kinds of grapes. It begins to be extensively cultivated, and this year it has appeared in abundance in the market of Philadelphia, at the price of 20 to 50 cents the half peck.

I had long ago wished to make experiments on its vinous properties, and I now have begun a series of them, of which I shall gradually communicate the results.

Mr. Brarier, of Philadelphia, had already published his experiments on its saccharine properties in the Journal of Pharmacy. He has shown that it is the only pear that affords a real syrup and sugar candy, equal to those of the sugar cane. And as sugar is the main principle of wine, I was induced to try my experiments.

The juice of the Seckel Pear weighs 1075, water being 1000, or 7½ per cent. more than water. This is more than many grape juices, which vary from 1040 to 1100. This juice is very sweet and pleasant, but thinner than good Must, or grape juice. The color is yellowish, with a tinge of reddish. One bushel of pears gives four gallons of juice. Therefore, if the wine or perry made with it may be of a superior flavor and quality, it may be worth $1 the gallon; thus a bushel of pears will produce $4; while the same quantity produces only one gallon of syrup worth 75 cents.

Mr. Brarier believes that when this useful tree becomes very plentifully multiplied, as it bids fair to be, since the nurserymen inform me that they sell more of it than of any other whatever, or than of all the other pears put together, and can hardly propagate it fast enough—when it will be as plenty as our cider apples, he thinks it may be made useful for the purpose of syrup and sugar. But how much more so for wine, or a superior perry!

The average of a full bearing tree is four bushels—one acre will hold easily 100 such trees. Thus one acre of orchard will produce at least 400 bushels, which, at $1 per bushel, $400 annual income, whether sold in market or made into syrup, which requires some care or trouble: while it will be $800 per acre for 1600 gallons of wine or perry, at 50 cents the gallon, or $1600 if it should sell at $1 the gallon, and with less trouble than the making of syrup or sugar, which is not so easily made as maple sugar.

I have an idea that by mixing the juice of Seckel Pears and wild grapes, an improved wine can be made. In fact the Seckel juice, by an addition of Must or grape juice, will acquire the tartaric acid, without which no wine can be had, as the malic acid of apples and pears makes only cider or perry. Some tartaric acid or argol might be added; but fortunately the grapes and Seckel Pears ripen at the same time, and thus by the mixture both the proper acid and mucilage of grapes may be procured for the vinous change.

My experiments will extend to this; and I shall use the poorest of our wild grapes,

such as those called chicken grapes, so as to have the worst result. Well knowing afterwards that by using the better sort of our wild grapes, Isabella, Bland, Catawba, &c., a superior result may be attained.

If it should be needful to thicken the Seckel juice so as to have a richer must, it may easily be done by boiling, reducing four gallons to three. Thus a variety of wines may be produced by these pears.

But as I am still bent upon improving our native wines, I deem that the juice of Seckel Pears, added to our native grape juice, in the proportion of one-third or one-fourth, would improve many of our wines, by imparting to them the delicate flavor of the pear, and even adding to the strength of any must which is under 1075 in weight.

Our Seckel Pears last from September to October, in Pennsylvania, New-Jersey, and New-York, and there is yet time for many farmers to take the hint, and make experiments this very year. Let them communicate the results, as I will do mine, and we shall acquire thereby a stock of knowledge for next year. This is quite a new subject and branch of industry, since the very fruit is new and only lately spread. It is truly an American fruit, deserving our attention and care. We ought to multiply it speedily and properly, by grafting with it all our worthless pears and apples. C. S. Rafinesque.

Philadelphia, Sept. 15th, 1833.

Memorandums about the Pea Crop. By W. Prince & Sons. [For the New-York Farmer.]

May 22 and 23, 1833. Planted all the following kinds on good ground, without manure, in rows:

June 20. Observed blossoms on the Nimble Dick, and on the Early Single Frame.

23. Blossoms on Bishop's Dwarf, (English seed).

July 8. Early Single Frame and Nimble Dick have pods fit to pick. These kinds much resemble each other.

Early Cluster and Dwarf Prolific blossoming.

August 2. Housed Nimble Dick, and thrashed them out.

7. Pulled up Botany Bay purple podded peas.

8. Pulled up Bishop's Dwarf, and put them on the fences to dry fully; they having ripened unequally, it was unsafe to house them without more airing.

13. Thrashed out Bishop's Dwarf, Botany Bay, Early Single Frame, and Lady's Finger.

16. Thrashed out Sugar Peas, Matchless Marrow, and Bergen Peas.

19. Pulled up Blue Imperial, and New Grotto Marrow, and put them on the fences—not fit to thrash.

Pulled up Spanish Dwarf, Dwarf Prolific and Early Cluster.

It appears that the Nimble Dick and Early Single Frame are the earliest of the above, and they resemble each other very much, but are supposed different varieties. They are fit for the table from twelve to fourteen days sooner than Bishop's Dwarf, or any of the kinds I have planted, and yielded more than Bishop's in proportion as 16 to 13. The Nimble Dick had pods fit for the table in 46 days from the day of planting. I believe that by picking out the earliest pods, they might have realized the story of forty-day peas.

Of Knight's Marrow we sowed two parcels, on the same day, the one from France and the other from England, and although there was in appearance no perceptible difference, yet the crop from the French seed was *ten days sooner* than that from the English seed.

You will perceive by the above statement that Bishop's Dwarf and the Dwarf Spanish vary materially as to the periods of maturity, &c. In fact, when Bishop's Dwarf was fit for the table, the Spanish Dwarf had but just commenced expanding its blossoms. The reason that many have considered them as equally early is this: a great quantity of the peas sold last spring for the *former* were of the *latter* variety, and a number of instances in proof of this fact have fallen under our own observation. Wm. Prince & Sons.

Linnæan Botanic Garden, Flushing,
Sept. 30, 1833.

Salubrity of the Climate of Florida, and of Tropical Countries. By H. Perrine, M. D. [For the New-York Farmer.]

To the Editor of the Medical Journal of Sciences, Philadelphia.

Dear Sir,—As the ship is still in the bay, I commence an additional sheet, to say that I have just read, in the May number of your Journal, your review of "Johnson on Change of Air"; and that I am highly delighted with your additions to his remarks on the climate of Italy. It is, indeed, a matter of momentous inquiry, to select the best winter retreat for our citizens, who are laboring under pulmonary disorder, and, I will add, under hepatic disease. However diversified the climate of our twenty-four existing states, the one great evil of a variable temperature is common to them all—sudden changes *cutting off* equally the corn of Maine and the cane of Louisiana, with the frosts of spring and of autumn; and *carrying off* the farmer of the north and the planter of the south, with consumption of the lungs and of the liver; and as the sufferer in either section but increases or exchanges disease in the other, he finally dies amid the great vicissitudes of the south of Europe, with the too tardy conviction, that the natural remedy of an equable temperature cannot be found in the miscalled *temperate*, but, properly, *variable* zones. I myself exchanged incipient pulmonary disorder of the bank of the northern Raritan, for actual hepatic disease on the borders of the southern Mississippi; but, thank God, I have experienced relief for both on the tropical shores of Yucatan. While you admit the wonderful equability of temperature of the mis-named torrid zone, and its consequent remedial powers for the consumptive disorders of our citizens, you still appear to retain that common belief of the general insalubrity of tropical climates, which is founded on the reports and resorts of war and trade; but as you are already divested of false impressions in behalf of southern Europe, you will as easily overcome unmerited prejudices against tropical America. The local circumstances which render certain districts sickly during the *hot* weather *beyond* the tropics, will render similar districts unhealthy during the *warm* weather *between* the tropics; but for every extra-tropical situation, which you may show me exempt from malignant fevers during our autumnal months, I will show you an inter-tropical situation exempt from malignant fevers throughout the year! When remote from noisome marshes and chilling mountains, you will be equally free from febrile and inflammatory diseases in the uniform temperature of every location on the dry shores of a tropical sea. This whole peninsula of Yucatan is proverbial for the dryness and healthiness of its soil and atmosphere. In the city itself, from which I am writing—in this very house, whose balcony almost overtops the wall washed by the sea, I should be content to pass all my remaining days, if the state were placed under our happy government, and inhabited by our intelligent people. Indeed, so delightful is this climate, that a winter in Yucatan would remind you that we read not of frost in the garden of Eden; and might incline you to look with indulgence on the sublime idolatry of the Peruvians, in worshipping the trûly material God of the World!

The desire to protract a tolerable existence amid the numerous natural blessings of such a climate, with the political aud social enjoyments existing in our boundaries alone, induced me to ascertain that *it does indeed* extend beyond the astronomical line, into our *own* territory, and under our *own* government—whose manifold advantages can be duly appreciated only by our citizens abroad, or by foreigners, who happily compare it to the air which covers us, unseen, unfelt, but essential to our existence. In my address "To the Intelligent Friends of the Union," I therefore briefly mentioned the very peculiar circumstance presented in the singularly uniform temperature of southern Florida for vegetable growth and animal health; and I now challenge my professional brethren in general to name any place in the world, which, in climate and position, can combine as many natural and social advantages, for a dry winter retreat to our invalids, as Cape Florida.

Very respectfully, your obedient servant,
Henry Perrine.

Grass Cloth, &c.—*Mr. Fleet:* I observe in the advertisements of the New-York Courier and Enquirer, of August 16th, under public sales, the following: 66 cases assorted bleached and brown *grass cloth*, and *fine and extra grass cloth* handkerchiefs; 150 bales and cases *Chinchu*, *Bamboo*, and other fancy baskets; 40 cases Suchan *Pongees*, 20 do. Cochineal and white *Pongee* handkerchief; 60 dozen fancy *cane* seat chairs. Cannot you enlighten us in your next number relative to the vegetables which furnish these materials? H. P.

Florida Productions.—I presume you have observed that the Charleston Mercury remarks that "no doubt can longer exist that the productions of the West Indies may be profitably cultivated in the peninsula of Florida. The sloop Capital, arrived yesterday from near Cape Florida with a quantity of bananas, plantains, and limes, as a part of her cargo, being the first shipment for commercial purposes, of fruit, produced at that place. A bunch of the bananas, and of the plaintains, and a few of the limes, may be seen at this office, all remarkably fine." H. P.

Cape Florida Nursery.—I am told that the St. Helena will suddenly start to-morrow, at 9 A. M. I fear these dilatory Mexicans will not have the hives of stingless bees ready. I want also to send you, if possible, three young plants, viz.: a true *pulque* Agave, a true *Henequen* Agave, and a true Pita plant, Bromelia or Furcræa, which you should have the greatest possible care taken of, as they give a death-blow to the veracity and intelligence of Humboldt. Should they go, exhibit them likewise at the American Institute, if

they arrive in time. As I can keep my nursery under way, provided J. Dubose of Cape Florida is persevering, through Sagra at Havana; and as my fellow trustees in the T. P. Company seem to hold back for the law giving the township of land, I shall remain here till I have news of its passage. Perhaps I will have time to-night to write a short address to the Horticultural Society, which I wish you to present and explain. If they and their brethren throughout the Union would do any thing in their own way, to forward the enterprise, it would soon be completed.

H. Perrine.

Sept. 16, midnight, 1833.

Pitting Turnips.—As the turnip harvest is approaching, we take the liberty of suggesting to those who cultivate the Swedes, our method for pitting them for winter. The pits are limited to two feet in width, and of an indefinite length, and are dug in a dry situation, seldom more than two feet deep. When the pit or hole is filled with roots as high as the surface of the ground, the turnips are laid by hand, the tops out, and sloping to the centre, until they terminate in a ridge which is generally about two feet above the ground. The whole are then covered with straw, and then with earth. The important point follows: The crown of the ridge is then pierced with an iron bar, at intervals of a yard, and the earth pressed out, so as to leave an entire aperture into the turnips, and into each of these apertures a wisp of twisted straw is loosely inserted. The roots will heat, and unless the rarified air is permitted to escape the turnips are apt to rot. The openings permit its escape, without danger of the frost doing injury. With this precaution we have not lost one bushel in a thousand. The same course would no doubt be beneficial in preserving the *mangel wurzel*. B.

Massachusetts Silk.—We observe that the Bristol County Agricultural Society have been awarded four premiums for white mulberry trees, two of which were given for those planted expressly for the making of silk on the same farms. The whole number of trees entered for the premiums was over 70,000.

Curing Butter.—We should suppose the following recipe recommends too great a proportion of saltpetre:

Take two parts of the best common salt, one part sugar, and one part of saltpetre, beat them up together, and blend the whole completely; take one ounce of this composition for every sixteen ounces of butter, work it well into a mass, and close it up for use.

The above by some is used in this proportion—ten ounces of salt to four ounces of clean sugar.

The following is the commendation given of this mode of practice in the Pennsylvania Farmer:

"The butter cured by this mixture appears of a marrow consistenee and fine color, and never acquires hardness, nor tastes salt; it eats as sweet after being kept three years as at first. It must be noted that butter thus cured requires to stand three weeks or a month before it is fit to be used; if it be sooner opened, the salts are not perfectly blended with it, and sometimes the coolness of the nitre will be perceived, which totally disappears afterwards."

This mixture will not cost more than about one cent per ounce, which is suffcient for curing one pound of butter. Country farmers, is not this worthy of your attention? As much so as sweet butter is better and bears a higher price than that which is strong and frowy. Besides, it affords to the dairy woman a settled rule, in an operation which, in the way it is usually practised, is done without rule or uniformity. I cannot but think, were people to adopt the mode here recommended, they would soon be convinced of the importance of it. Every one knows the superiority of meat preserved by a proportion of saltpetre and sugar with common salt, and it cannot but be expected that the same should be the case in respect to butter.

Salt your Corn.—Mr. Brown, of this vicinity, communicated some information to us, in a conversation recently held with him, in regard to the use of salt in corn which is put away in the husks, which may be interesting to the public. He stated that he received last year a quantity of corn, which he had purchased, in so wet a state that he was apprehensive that it would spoil. He remembered that it was a common practice in Pennsylvania, when hay was put away somewhat damp, or not fully cured, to sprinkle salt on it, and that such hay generally kept well, and that horses and cattle were very fond of it; he therefore concluded to try the experiment on his corn. He accordingly, as his corn was thrown in a pile on a large floor, sprinkled it with salt, using from a half a bushel to a bushel of salt to five or six hundred bushels of corn. The corn kept well, never became musty, and never had any weevil in it. Mr. B. still had of this corn when he communicated this information to us; and he stated that the bread which it then made was so sweet and good that it was esteemed preferable to that made of new corn. He also stated that he was not under the necessity of purchasing any fodder for his working oxen last winter, they fed upon the husks of this corn so freely; and he added that they kept in excellent order. Mr. B. was so well pleased with this experiment, that he is putting up all his corn this year in the same manner, using about half a bushel of salt to five hundred bushels of corn, which he thinks is enough.—[Ala. Intel.]

Price of Hops.—Hops vary much in price. Some years farmers and speculators are made "hopping" mad because they can get no price for them. This year, as appears below from the American Farmer, they are "hopping" for gladness.

The late increased demand for hops in New-York, and the high prices which the article commanded in consequence of the exportation of a large quantity to Europe, appears to have set our friends in the north "all hopping." Every northern agricultural paper that we open abounds in "hops, hops." It would seem from the following article, that one, at least, of these active gentry has hopped into a pretty round sum.

"*Hop Culture.*—The Bangor Courier mentions that one of the packets of that place, bound to New-York, recently took on board two hundred bales of No. 1 hops, raised in Penobscot. The value of this quantity was $8000, and the present prices of the article make the crop worth, on an average, $150 per acre. As the Maine soil and climate are suited to the culture, we see no reason why it should not be carried, in that as well as other sections, much farther than it has been. In Great Britain, about fifty thousand acres are occupied with hops."

Now this kind of business, at the rate of "$150 per acre," we would like very well to be at, if we only knew how. Has any of our subscribers ever cultivated the hop to any extent in this section of country, or farther south? and if so, cannot he or they tell us something about it? We should like to be "made sensible" of the practicability, prospects of success, and advantages of this culture, with the method of conducting it.

METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK,

From the 26th day of October to the 4th of November, 1833, inclusive.

[Communicated for the American Railroad Journal and Advocate of Internal Improvements.]

Date.	*Hours.*	*Thermomstr.*	*Barometer.*	*Winds.*	*Strength of Wind.*	*Clouds from what direction.*	*Weather.*
Octob.26..	6 a. m.	48	29.76	w by s	moderate		clear
	10	52	29.80	..	fresh	..—w by s	.. —fair
	2 p. m.	54	29.77	..	..	w by s	fair
	6	52	29.82	w	moderate	w	.. —clear
	10	48	29.92		fresh		clear
" 27..	6 a. m.	45	29.95	wsw	light	sw—w	fair —hazy —cloudy
	10	50	29.91	..—ssw	.. — mod.	..	.. — ..
	2 p. m.	59	29.78	sw by s	fresh	..	cloudy
	6	54	29.79	..	moderate	..	..
	10	52	29.81	..	..	..	..
" 28..	6 a. m.	46	29.81	nw	faint	..	..
	10	50	29.81	wnw	..	..	fair
	2 p. m	53	29.79	w	moderate	w—w by s	..
	6	46	29.80	..	..	w by s	..
	10	44	29.82	..	..	..	..
" 29..	6 a. m.	37	29.97	nw	faint	wnw	clear
	10	44	30.00	..	moderate	..	fair { snow at Richmond and at
	2 p. m.	47	29.95	..	fresh	..	.. { Ashtabula, twelve inches.
	6	42	29.98	..	..	..	..
	10	41	30.00		moderate	..	..
" 30..	6 a. m.	38	30.09	wnw	..	..	..
	10	40	30.15		fresh	..	..
	2 p. m.	42	30.20	w	..	..	..
	6	39	30.30	..	..	..	..
	10	36	30.39	..	..	..	..
" 31..	6 a. m.	32	30.48	..	..	nw by w	..
	10	37	30.48	..	..	..	..
	2 p. m.	41	30.48	..	..	..	..
	6	39	30.47	nnw	..		clear
	10	36	30.50	wnw			..
Novem.1..	6 a. m.	32	30.50	wsw	moderate		..
	10	40	30.40	s	..		..
	2 p. m.	49	30.30	ssw	..		..
	6	45	30.12	sw	..		..
	10	45	30.05	wsw	..		..
" 2..	6 a. m.	45	30.03	..	light	sw	fair —thin cirri
	10	47	30.02	wnw	..	..	..
	2 p. m.	50	29.92	..	..	w by n	..
	6	53	30.05	..	..	..	..
	10	48	30.10	nnw	..	..	..
" 3..	6 a. m.	43	30.20	..	..	..	..
	10	46	30.22	n	moderate	..	..
	2 p. m.	47	30.22	..	..		clear
	6	43	30.29	..	..		..
	10	36	30.30	nnw	..		..
" 4..	6 a. m.	30	30.38	..	..		..
	10	34	30.37	..	..		..
	2 p. m.	39	30.35	n	..		..
	6	37	30.37	..	fresh		..
	10	33	30.47	ne	..		..

Average temperature of the week ending Monday, October 28, 49°.63.
Do. do. do. do. November 4, 40°.94.

NEW-YORK AMERICAN.

NOVEMBER 9, 11, 12, 13, 14, 15—1833.

LITERARY NOTICES.

The Infirmities of Genius, as evinced in the habits and peculiarities of Men of Genius, by R. R. Madden, Esq., author of Travels in Turkey. 2 vols. *Philadelphia:* Carey, Lea & Blanchard.—There have appeared from time to time in our columns extracts from this work, which will, for those who recall them, serve to display its character, and the manner in which the design of the author is executed. We think well of both; and cannot but believe that for miscellaneous readers these volumes will have a great charm, while to the hard student the observations and examples with which they abound, of the wearing of the body by overtasking the mind, may be greatly useful, as a guide and a warning. Our clever countryman, Dr. Dekay, in his Sketches of Turkey, has taught us rather to distrust Mr. Madden as a traveller. Perhaps there is less room for errors of fact in the volumes before us, which are rather a collection of curious incidents and circumstances connected with the career of a few eminent men, such as Byron, Cowper, Scott, &c., with the reasonings and illustrations furnished by their pursuits and habits, of the influence upon life of literary avocations.

Mechanics' Magazine and Register of Inventions, &c. Vol. II. No. 10. *New York:* D. K. Minor.—In addition to the usual and instructive variety furnished by this deserving periodical, we have in the present number a detailed statement of all the articles exhibited at the late Fair of the Institute in this city, and moreover, the address of Mr. Kennedy, at the Chatham street Chapel, before the Society of the Institute and a large assemblage of citizens. This address is certainly clever. It is as a whole an ornate and attractive declamation in favor of a protective Tariff, and against the system of free trade—claiming, which we confess surprised us not a little, that even Mr. Huskisson's doctrines, applied to this country, are the doctrines of the Tariff party! There is both ingenuity and talent in the general construction of the address, and in the selection of its topics; and it could not therefore fail to be highly acceptable to the Society before whom it was delivered. We cannot leave this Magazine without again saying that it seems to us to have a strong claim on the support of all the industrious classes connected with manufactures and the mechanic arts.

Life of Oliver Cromwell; by the Rev. M. Russell, L. L. D. 2 vols. New York: *J. & J. Harper.* Constituting Vol. LXIII and IV of the Family Library.—The life and career of Cromwell have been the theme of unmeasured censure, and equally unmeasured admiration, according to the political bias of the parties discussing them. Mr. Russell has endeavored to present an impartial view of both; and considering how difficult impartiality is, even for those in the habit of, and with the qualifications for, forming an opinion for themselves, he has succeeded pretty well. The leaning, if any, is against Cromwell, whom, in the sketch of him with which the history closes, and which we extract, he rather underrates, as we think, in the qualities of greatness.

The great art of attaining success, in all commotions excited by political or religious change, is founded on the knowledge of character, and on the talent of directing to a particular object the passions of the multitude, and the ambition of their more active leaders. By this mastery over the feelings and designs of his contemporaries, Cromwell, there is no doubt, acquired the means of accomplishing the most arduous parts of his undertaking. He thereby broke the power of Parliament, from whom he first derived his authority; wielded the mighty influence arising from religious sentiment; and, finally, induced the majority of a democratical government to accede to his desire of ascending the throne, as the avowed monarch of three kingdoms which he had in effect subdued.*

Of Cromwell it may be said that he was rather a remarkable man than a great one, and that the story of his life excites in the mind of the reader more of surprize than admiration. The elements of true greatness were deficient in his character: he wanted especially self-denial, sincerity and gratitude. He was even destitute of that sensibility, or delicacy of feeling, without which no man can attain the higher degrees of excellence. The mere circumstance, for example, trifling as it may appear, of his occupying at Whitehall one of the king's beds while his majesty was under the hands of his jailer in the Isle of Wight, argues a base spirit; and the disgust which arises from this contrast is not a little increased, when we are told, that while in the possession of the royal bedchamber, and even reclining on the couch, he gave audiences to the principal persons of the republican government.

It is indeed mortifying to human pride to reflect how mean and worthless, on many occasions, are the individuals who start up from obscure life to seize the loftiest and most commanding positions of society. In the case of Cromwell, however, we see qualities which were adapted exclusively to the period in which he lived, and which, at any other time, by being confined to a very limited range, could not have produced any deep or permanent impression on public affairs. His enthusiasm, and fanatical propensities would, at a more tranquil epoch, have spent themselves on local objects and domestic reformation. He might have figured at a county meeting or a Bible society, and under the mask of his natural dissimulation, have acquired a character for zeal, patriotism, and independence; but in a peaceful, settled period, such as that we have supposed, his abilities would not have enabled him to surmount the obstacles that attached to his condition in life, and to reach any marked distinction in civil or military pursuits.

In comparing what Cromwell actually accomplished with the means of which he was possessed, no writer has been more successful than Cowley; who, in the discourse already referred to, speaks of him in the following terms. "What can be more extraordinary, than a person of mean birth, no fortune, no eminent qualities of body, which have sometimes, or of mind, which have often, raised men to the highest dignities, should have the courage to attempt, and the happiness to succeed in, so improbable a design as the destruction of one of the most ancient and solidly founded monarchies upon earth; that he should have the power or boldness to put his prince and master to an open and infamous death; to banish that numerous and strongly-allied family, to do all this under the name and wages of a parliament; to trample upon upon them, too, as he pleased, and spurn them out of doors when he grew weary of them; to raise up a new and unheard of monster out of their ashes; to stifle that in the very infancy, and to set himself up above all things that ever were called sovereign in England; to oppress all his enemies by arms, and all his friends afterwards by artifice; to serve all parties patiently for awhile, and to command them victoriously at last; to overrun each corner of the three nations, and overcome with equal facility both the riches of the south and the poverty of the north; to be pleased and courted by all foreign princes, and adopted a brother to the gods of the earth; to call together parliaments with a word of his pen, and scatter them again with the breath of his mouth; to be humbly and daily petitioned that he would please to be hired at the rate of two millions a year to be the master of those that hired him before to be their servant; to have the estates and lives of three kingdoms as much at his disposal as was the little inheritance of his father, and to be as noble and liberal in the spending of them; and, lastly (for there is no end to all the particulars of his glory), to bequeath all these with one word to his posterity; to die with peace at home and triumph abroad; to be buried among kings, and with more than regal solemnity; and to leave a name behind him not to be extinguished but with the whole world, which, as it is not too little for his praises, so might have been too for his conquests, if the short line of his human life could have been stretched out to the extent of his immortal designs?"†

The life of Cromwell may be studied with special advantage in our country, as showing the gradual and crafty, but sure devices which have so often led, and which will again, in spite of history and experience, often lead popular masses, contending, as they believe, for freedom, into the clutches of those, who, with fair seeming, and loud professions in the cause of liberty, aim only at the possession of office and power.

Illustrations of Political Economy, No. XIX. Berkley the Banker; Part I, No. —: Our Parish. By *Harriet Martineau.* Stereotype edition. *Boston, L. C. Bowles; New York, C. S. Francis.*

These two little volumes—we hope all Miss Martineau's illustrations may be in like manner stereotyped and widely circulated in our country—though adapted to the peculiar state of society in England, especially in respect of its poor laws and banking system, are yet so sensible, so clear, so natural, and withal so attractive as mere stories, that we soon lose the impression that they lack that immediate application here which they must find in every town and village of England. From Berkley the Banker we make a single extract. It is the letter of the daughter of the banker, written to her mother on hearing of the failure of the father's bank—a failure by which that family would be reduced from wealth to self-dependence. It will make our readers anxious, we are sure, as we are, to see in the sequel of the tale how this family is borne through its reverse of fortune.

"Dearest Mother,—The news which Horace has brought grieves me very much. My great trouble is that I am afraid Fanny and I know too little at present what will be the extent of such a trial to feel for my father and you as we ought. We are aware, however, that it must be very great and long-continued to one who, like my father, has toiled through a life-time to obtain the very reverse of the lot which is now appointed to him. There is no dishonor, however, and that, I think, is the only calamity which we should find it very difficult to bear. Your children will feel it no misfortune to be impelled to the new and more responsible kind of exertion of which their father has kindly given them frequent warning, and for which you have so directed their education as to prepare them. Fanny and I are too well convinced that the greatest happiness is to be found in strenuous exertion on a lofty principle, to repine at any event which makes such exertion necessary, or to dread the discipline which must, I suppose, accompany it. I speak for Fanny in her absence as for myself, because I have learned from her to feel as I do, and am sure that I may answer for her; and I have written so much about ourselves, because I believe my father in what he has so often said,—that it is for our sakes that he is anxious about his wordly concerns. I assure you we shall be anxious only for him and you and Horace. Horace, however, can never be long depressed by circumstances; nor do I think that any of us can. I mean to say this in the spirit of faith, not of presumption. If it is presumption, it will certainly be humbled: if it is faith, it will, I trust, be justified. In either case, welcome the test!

"I expect Fanny home by the middle of the day to-morrow; and I hope we shall see you in the evening, or the next day at farthest. My father may rely on perfect freedom from disturbance. I shall provide that nobody shall come farther than the white gate, unless he wishes it. I send you some grapes, and my father's cloth shoes, which I think he must want if he has to sit still much at his writing. I shall send you more fruit to-morrow; and

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* "I have often observed, with all submission and resignation of spirit to the inscrutable mysteries of Eternal Providence, that when the fulness and maturity of time is come that produces the greatest confusions and changes in the world, it usually pleases God to make it appear, by the manner of them, that they are not the effects of human force and policy, but of the divine justice and predestination; and though we see a man like that which we call a Jack of the clock-house, striking as it were the hour of that fullness of time, yet our reason must needs be convinced that the hand is moved by some secret, and, to us who stand without, invisible direction. And the stream of the current is then so violent, that the strongest men in the world cannot draw up against it, and none are so weak but they may sail down with it. These are the spring-tides of public affairs, which we see often happen, but seek in vain to discover any certain causes."—[Cowley's Essay on the Government of Oliver Cromwell.]

† Cowley's Discourse on the Government of Oliver Cromwell.

the messenger will wait for any directions you may have to give, and for the line which I am sure you will write, if you should not be coming home in the evening.

"Lewis, who has been a very good and pleasant companion, sends his love, and his sorrow that anything has arisen to make you unhappy.

"Farewell, my dear father and mother. May God support you, and bring blessings out of the misfortune with which He has seen fit to visit you! With His permission, your children shall make you happy yet.—Your dutiful and affectionate daughter,

"MELEA BERKELEY.

"P. S.—No one has been so anxious about you as Henry Craig. If he thought it would be any comfort to you to see him, he would go over to D—— on the instant. He said so when we were only in fear. I am sure he will now be more earnest still. As soon as Horace is gone, I shall write, as he desires, to Reading, and Manchester, and Richmond. If there are any more, let me know to-morrow. I hope you will not exert yourself to write to anybody at present, except Fanny or me."

POPULAR ESSAYS ON NAVAL SUBJECTS; by the Author of 'A Year in Spain.' New York: GEO. DEARBORN.—These Essays, dedicated most appropriately to the junior officers of the Navy, by one who is himself an ornament to that service, appeared originally, though not, as at present, connectedly, in the *Encyclopædia Americana*. In their present condensed form, they furnish information useful to the young officer, and valuable to all, in a style easy and polished, and, at the same time, unambitious.

The extract we subjoin, on the origin of the art of navigation, will witness for us how well the volume deserves our praise:

Horace has well said, that his heart must needs have been bound with oak and triple brass, who first committed his frail bark to the tempestuous sea. Nothing, indeed, conveys a higher idea of human daring than the boldness with which man rushes forth to encounter the elements; nothing speaks louder in praise of human ingenuity than that wonderful art by which he is enabled to forsake the land, stretching forth until it fades from the horizon, and nothing visible remains but the hollow heavens above, and a trackless waste below; driven from his course by adverse winds, yet, by dint of perseverance, wearying out the elements; and at length arriving, with unerring certainty, at the haven where he would be. And if the daring and ingenuity of the navigator deserve our admiration, the result of his efforts will not appear unworthy of the means. It is to the exercise of his wonderful art, that we are indebted for the improvement of our condition, which arises from the exchange of the superfluity of one country for that of another, the whole world being penetrated, and every clime made tributary to every other, until the whole globe is reduced to one common country. Above all, to navigation are we indebted for that higher and nobler advantage,—the interchange of sense and sentiment, which makes wisdom common to the world, and urges man onward to perfection.

Yet it has not always been so. Time was when the canoe, or the raft, constituted the only ship of the sailor, and when the narrow precincts of a lake or river set bounds to his roving disposition, and confined him within view of familiar objects. Advancing a step farther, we find him venturing from headland to headland, or from island to island, with a view of gratifying his curiosity, or bettering his condition, until a gale, driving him to some unknown coast, increases at once his knowledge and hardihood. Meantime, his bark adapts itself to nobler functions, enlarges its size, and improves in form; the rudder is added, the mast is better sustained, and the sails receive a more favorable application. And thus the art by which the ship is made, and that by which it is conducted, advance with equal steps. Deprived of the aid of surrounding objects, the land withdrawn from view, and nothing within the verge of the horizon but a waste of trackless water, the mariner casts his eye in despair to the overhanging heavens. Aid is granted to his prayers: the constellations assist him in his course: among many revolving stars, he finds one steadfast, and makes it his perpetual guide. Such do we find the actual state of navigation among the savage tribes of our own day; and such was also the progress of the art among the earliest nations that improved it. Not the least of the improvements which we have made in this art, is that simplification in practice, by which it is rendered available with little study and capacity.

Anomalous as it may seem, yet it is true that more study, more experience, and laboriously acquired information, were necessary to form an Acestes, or a Palinurun, than are now required to furnish forth a La Perouse or a Parry. The master, or pilot, of ancient times, who had the command of the sailors, and directed all the evolutions, was not merely required to know whatever related to the management of the sails, the oars, and the rudder: he was to be familiar with all the ports that lay in the track of his navigation, the landmarks by which they were designated, and all the rocks, quicksands and dangers of the intervening deep: he was to knew the course of the winds and the indications that preceded them; also the movements of the celestial bodies, not merely for the purpose of directing his course by them, but to understand the winds and weather, which some of them, as Arcturus and the Dog star, were believed to portend. Moreover, he had to be skilled in reading the various omens, which were gathered from the sighing of the wind in the trees, the murmurs of the waters, and their dash upon the shore; the flight of birds, and the gambols of fishes. A voyage was, in those days, a momentous and awful undertaking. When the time arrived for the sailing of a ship or fleet, the masts were raised, the sails bent, and all made ready with solemnity, and great parade of preparation. If, as was most usual, the ships were hauled up on shore, the mariners placed their shoulders at the stern of the ships, and, at the word of command, pushed their bows forward into the sea, leaping aboard when they floated. Levers were used to move the heavier vessels, and in later times, the helix (probably jack-screw,) which Archimedes had invented for that purpose. Before putting to sea, the Gods were ever solemnly invoked and propitiated by numerous sacrifices; thus we find all Homer's heroes sacrificing to the gods before they undertake a voyage; and Virgil's Anchises ventures forth only after having devoted a bull to Neptune and a bull to Apollo.

Nor did the voyagers alone supplicate protection: the crowds of friends and countrymen, who thronged the shore, joined fervently in prayers for their deliverance from danger, and like the Venusian poet, commended their departing friends to the presiding deities of the winds and waves. All omens were carefully regarded; the entrails of the sacrifices examined, with every possible prognostic of good or evil; and a very small matter, the perching of swallows on the ships, or an accidental sneeze to the left, was enough to delay departure. As this, however, never took place without the most favorable auspices, it was always joyful. The ships were adorned with streamers and garlands of flowers; and, when the signal was given from the admiral ship, by sound of trumpet, a shout of rejoicing rang through the fleet, sent back by the responding blessings of the friends that remained. After advancing a short space, doves, which the mariners had brought from their homes, were released, and their safe arrival—not unfrequently charged with the last adieu of a departing lover—was considered auspicious of the return of the fleet. The admiral led the van, conspicuous by his painted sails and streamers, and opened a path in which many followed. In moderate weather, the ships often sailed side by side; but, as the wind freshened, and the sea grew rough, the order became more open, to avoid contact. At all times, they kept close to the land, following the indentations of the coast. When night approached, it was customary to anchor, or else to beach the vessels, that the crews might repose, each rower sleeping on his bench, ready to renew his labors with the returning sun. If the amenity of the weather, the friendly aid of the moon, or the open nature of the navigation, admitted of sailing during the night, the plummet or the sounding-pole directed their course, or it was shaped, as by day, from headland to headland. If the land were not visible, the known direction of the wind continued, with the aid of the stars, to guide them. Cynosura was the favorite of the Phœnicians: the Greeks abandoned themselves to the direction of Helice.

Having escaped the multiplied dangers of such a navigation, and having accomplished their object, the ships returned home with songs and rejoicings. If they were to be stranded, the sterns were turned towards the shore, and the vessels forced backwards upon it with the oars, until the crew landing, drew them beyond the reach of the surf. Sometimes they were taken into the beautiful moles, or artificial harbors, which the ancients constructed, with great labor and ingenuity, within the natural ones. These were in the shape of crab's claws, or horns, the ends, which formed the entrance, so overlapping as to exclude the swell of the sea. Castles defended their approach, and a light-tower, placed at the entrance, guided those who sailed along the coast, or desired to enter by night. It was called Pharos, from the island at the mouth of the Nile, where the first tower had been erected. Here the vessels were not hauled up, but simply fastened to the rings, or pillars, provided for the purpose, while at the inner ports were docks and stores for building and repairing. In this port, too, were temples devoted to the Gods, and especially to the patron of the place, where propitiatory sacrifices were made, and vows fulfilled and recorded: here, too, were numerous taverns, and places of more licentious gratification. Whether, however, they stranded their vessels on the beach, or moored them in the harbor, the mariners, before repairing to these resorts, fulfilled the vows made before departure, or in seasons of peril, offered thanks to Neptune, and sacrifices to Jupiter, for having granted them release from the durance of their ships. Upon those who had escaped shipwreck, gratitude was more deeply incumbent. In addition to other sacrifices proportioned to their means, they usually offered the garment in which they were saved, together with a picture descriptive of the disaster. If nothing else remained to them, the hair was shorn from the head, and consecrated to the tutelar deity; hence offering the hair was the last vow of the distressed mariner.

There is much that is beautiful in these simple acts of piety; but, except in some Catholic countries of the Mediterranean, where pictures of rescue and garments are still hung before the shrine of an invoked intercessor, and where processions are still made, after escape from shipwreck, none of these touching customs now remain. What can be more beautiful than the grateful sense of divine interference with which Columbus and his followers hasten to return their vows after their safe return to Palos? Such piety, if it availed not to avert present danger, at least served to inspire confidence to meet it; and, when past, the gratitude which it occasioned must have tended to refine the sentiments and ennoble the heart.

SKETCHES AND ECCENTRICITIES OF COLONEL DAVID CROCKETT OF WEST TENNESSEE; N. York, J. & J. Harper.—We hardly know whether this is a burlesque or real history of a man quite remarkable in our annals, and in some sort the type of a race, which steamboats and the rapid extension of civilization in the far West are fast extinguishing. It is in this sense a curious book, which we have read, we confess, with some interest and much incredulity.

SCOTT'S WORKS.—Four numbers more of Conner & Cooke's cheap edition are before us. They contain the Talisman, Woodstock, the Highland Widow, the Chronicles of the Canongate, and Anne of Gierstein.

THE NATIONAL PORTRAIT GALLERY, Part VII; by *Jas. Herring* of New York, and *Jas. B. Longacre* of Philad.—This number furnishes the portraits and biographies of *Daniel Webster*, *Bishop White* and *Chief Justice Shippen* of Philadelphia. The first and the last portraits are good—of Bishop White we have seen a better. The memoirs are brief and well written.

We conclude, as usual, and as we hope now regularly to do, with No. 3 of our correspondent H.

Harrisburgh, Pa. Oct. 22.

I write to you from the banks of the Susquehannah. A dull steady rain prevails out of doors, and after wading through the mud about the purlieus of this place for an hour, I am glad to be housed at last for the rest of the day. I see the capital of Pennsylvania under every disadvantage, but still am pleased with it. Although a city in miniature (and this contains only four or five thousand inhabitants) is generally odious to one who as resided in a metropolis—reminding him perhaps of Goose Gibbie in jack-boots, at the Review of Tulietudlem—there is much in the appearance of Harrisburgh to reconcile the most captious to its assumption of civic honours. The manner in which the place is laid out and built, the substantial improvements going forward, and the degree of wealth and enterprize manifested in those already made, and above all, its beautiful scite, make it an exception to the generally uninteresting character of country towns.

The chief part of the town lies on a piece of Champaigne land about 41 feet above the level of the Susquehannah; the handsom street in the place, though occupied chiefly by petty tradesmen and mechanics, verging on the waters of that lovely stream. The other streets run at right angles to, and parallel with, the river which is nearly straight, when it washes the town with a graceful bend near the suburbs of either end. Facing the Susquehannah at the upper part of the town, and only a few hundred yards

from the river, is a sudden elevation rising into a level platform about 60 feet above the surrounding plain. Upon this eminence, fronting the river through a broad street, stands the Capitol and State buildings containing the chief public offices. The centre edifice and one standing detached on either side, are all ornamented with Grecian porticos, and their size, their simple design and just architectural proportions, would make an imposing display and impress a stranger favourably until he ascertained the paltry material of which they are built. But I defy any one, unless he may have written sonnets to Time in the ruins of Babel, to have one respectful association with a structure of *brick*. Putting the perishable nature of the material entirely out of the question, though a sufficient objection to its use in a public building, its size alone is fatal to effect in a structure of any pretension. For it is massiveness in the details as well as in combination, which impresses the beholder in architectural form: and the pyramids of Egypt themselves if reared of boyish marbles, though they might be so ingeniously put together as to awaken curiosity, could never inspire awe. The disciple of Malthus perhaps might busy himself in calculating how many urchins it took —supposing every one in the dominions of Cheops capable of bearing marbles to have contributed his mite to complete the fabric—but where would have been all those ingenious surmises with which antiquarians, since the days of old Herodotus, and who knows how many centuries before, have puzzled the brains of their readers—where would be that reverence with which mankind in every known age have regarded these monuments of the power of their race in the early vigor of its creation—where would be the awe with which we now regard these artificial mountains that rear their stupendous forms in proportions that mock at modern art; and, rivalling in their heaped up rocky masses the masonry of Nature herself, speak of the labours of a race for whom the Mastodon of our own continent would have been a fitting beast of burthen?

What a singular perversion of taste is that existing in the towns and villages through which I am passing, which induces the inhabitants to make their barns and cow-sheds of solid stone, and their ornamental buildings of brick and stucco. I sometimes see Gothic churches of the first and Grecian fronts of the last; and these not unfrequently planted in the midst of a cluster of gray mansions whose towering gables, huge stone buttresses and deep cut narrow windows, make the former show like some port poplar thrusting his dandy figure among a clump of hoary oaks. Still one cannot but admire the air of comfort—I might almost say of opulence—which prevails throughout the country I am passing over. This, in the village of Reading, through which we passed yesterday, is particularly the case. It has a population of about 7000 inhabitants; and the numerous stages filled with passengers which pass daily through it, the wagons loaded with produce that throng the streets of the place, and the rich display of goods and fancy articles in the shops give Reading a most flourishing appearance. It is prettily situated on the Schuylkill, with a range of high rocky hills in the rear; but its position wants the picturesque beauty of Harrisburgh. Here the Susquehannah is, I should think, full half a mile wide. It is studded with wooded islets, and flows between banks which, though not very bold in themselves, yet rise with sufficient dignity from the margin, and blend with the undulating country, until its arable slopes and sunny orchards are bounded by a distant range of mountains.

The prospect from the Capitol is, I am told, uncommonly fine; but the thick mist which limited my view to a very narrow compass while walking along the banks of the river an hour ago, has hitherto prevented me from trying the view. I shall visit the spot from which it is to be had in the morning.

Yesterday I had, for the first time, the gratification of hearing a sermon pronounced in German—the common language of this part of the country. I walked some distance through a pelting shower to the Church, in Wornelsdorf, and though the preacher was prevented by sudden indisposition from giving more than the exordium of his discourse, I was sufficiently delighted with his clear mellow enunciation, and the noble sound and volume of the language which he spoke in all its purity, to regret most deeply an often deferred resolution of mastering that manly tongue. One must think more strongly in such a muscular language. I have frequently had occasion to admire the expressiveness of the German in poetry when Goethe or Schiller were quoted by others, but I had not till now a conception of the effect in oratory of that language which gave energy to the torrent of Luther's denunciations, and richness to the flow of Melancthon's eloquence. I listened, it is true, not understandingly, but like one who admires the compass of an instrument though ignorant of the air that is produced from it. I conceived however that I could follow the preacher in his preliminary address; and indeed the tone of fervid feeling and unaffected solemnity in which it was made would have impressed, if it did not bear along, the most ignorant listener. The congregation, owing to the weather, was but small. The two sexes sat apart from each other and had a separate entrance to the building. I was not aware of this at my entrance, and as a matter of good taste took my seat among the ladies, when an active master of ceremonies, probably the sexton, insisted upon showing me to another place, and after a while induced me to change my situation, after having once or twice declined with thanks what I conceived to be an officious act of politeness on his part. The young *Vrouwties* appeared to regard our interchange of civilities with particular interest, and I am half persuaded that had I not struck my flag to the gentleman-usher just when I did, the womankind (as Jonathan Oldbuck presumes to call the suzeraines of the lords of creation) would have risen to a man (Hibernicé) in my favor and insisted upon keeping me among them.

I shall keep open this letter till to-morrow evening and add every thing I have to say on this side of the Alleghanies—For the present, good night.

October 23.—The rain still continued when I left Harrisburg this morning, and the view I promised myself from the Capitol was not to be had. My disappointment at not having seen more of the Susquehannah is not slight, and the feeling is enhanced by a delicious glance I caught of its waters in the sunlight as the clouds parted for a moment just as a turning of the road shut out the view behind us. I almost grew melancholy, while recalling with a sort of home feeling the delight with which, years ago, I first beheld its sources, to remember now that it was the last stream that ran eastward I should see for a long time to come. And then those calm, gentle waters, which flow as smoothly as the verse of him who has immortalized them, once seen are never to be forgotten nor passed again without interest. The Susquehannah has its birth in one of the loveliest of lakes, and it bears with it the impress of its parentage wheresoever it wanders—the bright green surface and transparent depths below, the winding current which, unbroken by cascade or rapids, whether it steals through the rich fields and beautiful glens of Otsego, or smiles on the storied vale of Wyoming, loiters alike beside its fertile banks, as if reluctant to pass them on its long journey to the ocean. For grandeur of scenery, indeed, the Hudson far surpasses it; and where is the stream that can match that lordly river! But there is a gentle beauty about the Susquehannah which touches without striking, and wins while you are unawed. The one, like a fair face lit up with glorious intellect, commands and exacts your homage; with the other, as with features softened with tenderness, you leave your heart as an offering.

We are now, you will observe, on the main road from Philadelphia to Pittsburgh, and as our stopping places, instead of being in those mongrel establishments, half inn, half farm-house, will probably be at the stage offices along the route, but little opportunity will offer for observing the manners of the residents. Thus far I cannot speak too warmly of the civility and kindness of the people among whom I have passed the last week; with the exception of the amusing little incident detailed in my first letter, not a circumstance has occurred to qualify this opinion. The general appearance of the country east of the mountains, you have already gathered from the two previous letters. Latterly we have ridden so continually in the rain, that I have had no opportunity of seeing it to advantage. But the only change I observe in the face of the country is that, instead of being broken up into small hills, where forest and cultivation are most happily mingled—as around Bethlehem—here the vales spread out into plains, and the high grounds receding, swell off till they show like mountains in the distance. I miss too those fine barns upon which I have dwelt with so much pleasure, nor do the better fencing and spruce looking dwelling-houses compensate for the loss of the imposing appearance of such huge granaries in an agricultural country. I thought when first observing the change and marking the herds of cattle and droves of sheep that sometimes throng the roads, that we had got at last completely into a grazing region. But the delicious wheat bread met with at the humblest inns with the little stock to be seen in the fields, seems to indicate that such is not the case. It seems odd in a country so thickly settled, where one meets a hamlet at every two or three miles, with scattering houses at frequent intervals between them, that wild animals should be yet abundant. But I was told at Bethlehem that it was not uncommon to kill bears upon the neighbouring hills; and a gentleman informed me this morning that they frequently drove deer into the Susquehannah within a few miles of Harrisburgh. I can account for it only by the fine forests which are every where left standing isolated in the midst of cultivated tracts, making so many links in the chain of woodland from mountain to mountain across the country, and tempting the wild animals, while it extends their range, to venture near to the settlements. In New-York you may be aware that owing to the wholesale manner in which clearings are made, the deer are swept off with the forests that sheltered them, and retreating into the mountain fastnesses of the northern counties, or the rude wilds of the southern tier, are there crowded so thickly as to be butchered for their skins. In the former region, while fishing, within a few weeks since, among the picturesque lakes which there stud the surface of the country, I have seen the deer grazing like tamed cattle on the banks. It was a beautiful sight to behold a noble buck calmly raising his head as the skiff from which we trolled approached the margin, and then, after standing a moment at gaze, toss his antlers high in air and with a snort of defiance bound into the forest.

Farewell. You shall hear from me again so soon as we pass the Alleghanies, the first purple ridge of which I can already see limning the sky in the distance. In the meantime I will note down anything of interest which catches my eye, and endeavour to give you hereafter some idea of the lofty landmark which, before you read this, will be placed between us. H.

FOREIGN INTELLIGENCE.

LATER FROM EUROPE.—The packet ship Virginia, Harris, from Liverpool, brings us London papers to the 7th ult.

From Portugal, the news is not so late as we have direct by the way of St. Ubes and Boston. There are some details supplied, however, which, if true, may be deemed important to the cause of the Queen. No new attack on Lisbon had been made, but the defeat of that of the 14th, on a particular point of the lines of defence, is magnified by the Pedroites into something so important, as, with other causes, to have led to the resignation of Marshal Bourmont and the French officers who accompany him. It will be seen that the fact of this resignation is strongly averred in the extracts we subjoin, but there may yet be error in it. If it *be* true, it must, we apprehend, have a decisive influence against Miguel.

It is however to be borne in mind, that as yet on manifestations have appeared in the interior of Portugal, friendly to Don Pedro and his daughter, whose armies only possess Oporto and Lisbon, and a narrow strip on the seaboard. Although, therefore, the forces of Don Miguel may discontinue their attacks on Lisbon, it does not seem to follow that the war will be speedily concluded. If, indeed, the attempt which Don Carlos will undoubtedly make to gain for himself the crown of Spain, be at all successful, his cause and that of Miguel will unavoidaly become united, and together may draw all Europe into the vortex of the family quarrels of the Peninsula.

Donna Maria arrived in her capital on the 23d of September, and was, as of course on all such occasions, received with every demonstration of joy and attachment, such being a regular part of the performance, let who may be the object.

The death of the King of Spain is also reasserted, and with a probability, greater than heretofore, of its truth. The Queen Regent is said to have assumed the reins of Government, without making any change in the old Ministry. Don Carlos, if he hopes to reassert his claims to the crown, must strike soon.

The speculations on the late meeting of the sovereigns of Russia and Austria, seem now to have resolved themselves into the conclusion, that a Congress of Ministers is agreed to be held in Vienna during the winter, in which the state of Germany, particularly as to the freedom of the Press, is to be discussed and proper bonds are to be contrived against too much liberty of discussion.

The Cotton Market at Liverpool had revived, and prices are quoted at a *half penny* advance on the lowest previous prices.

[*From the Liverpool Albion of the 7th.*]

Foreign.—The Conference of Munchengratz is really over. The Journals are nearly silent respecting its objects and its cause, and, perhaps, for the best of reasons, that there was, in fact, nothing important belonging to its determinations. The daughter of Prince Polignac is dead. She had frequently implored permission for her father to pay her a last visit, well guarded, and on giving his parole d'honneur, but it was refused! The Archduches Maria Louisa has ceded to Madame Letitia, the mother of Napoleon, the whole of the property of the late Duke de Reichstadt including the legicies left him by his illustrious father. Madame Letitia has since executed a formal act, granting the arms of Napoleon to the Museum of France, and the fortune of her grandson to the French hospitals.

Letters from Tampico to Oct. 9th, were received yesterday, via. New Orleans. The *conducta*, from Zacatecas, was expected to arrive in a day or two. The Rob Roy would be despatched for this port immediately after the arrival of the conducta.

The last account from the seat of war, stated that St. Anna had then a force of 10,000 men, which was amply sufficient to overcome his opponents, Arista and Duron.

SUMMARY.

[*From the Daily Advertiser.*]

A singular phenomenon was exhibited in the heavens, on Wednesday morning, which excited the admiration of all who witnessed its extraordinary appearance, and is well worthy the investigation of scientific enquirers. About 4 o'clock in the morning a large meteoric body, resembling a globe of fire, exploded in the zenith of the heavens, and poured a continuous stream of flaming particles on the sky beneath. The increasing scintillations from this luminous globular body were showered down like drops of falling rain, illuminatng the whole visible horizon, and scattering rich rays of light on each airy path as they fell. After this meteoric shower of fiery rain had some time descended, a luminous serpentine figure was formed in the sky, which, on its explosion, produced a shower of fire equally brilliant and incessant. The inflammable particles then apparently cohering in one ignited mass, rolled up in a ball to the zenith; and from this lofty elevation burst, and shot out streams of electric fire from its lumisous orb, which continued to fall until the hour of six in the morning, when the dawning day put an end to their glory and their flight. The cause of this splendid and unique appearance of the heavens, and the magnificent phenomenon, with which we have been visited, is left to the wise to interpret. From them we invite a solution of this wonderful visitation.

RUMORS AND COMMOTIONS.—Our city to-day is full of strange rumors, concerning a phenomenon in the heavens, observed about five o'clock this morning. It is related by certain milk-men and market people, who were up and stirring at that early hour, that several stars were observed to leave their stations in the space above, and fall to the earth, scattering their brilliancy in a thousand particles of light and heat. Some allege that strange noises were heard, and others that meteors and comets sailed through the air in majesty and splendor unexampled. A piece of falling star is said to have been picked up, in the neighborhood of the city, by a milk girl, wearing a green calash, which was about the size of a *piece of chalk*.

We note these matters on hearsay evidence, not having risen this morning until fifteen minutes after the strange phenomenon was observed.—[Phila. Gaz. 13th inst.]

The Marco Bozzaris.—The steamboat Marco Bozzaris, Capt. Sutton, which left this port on the 15th Oct., bound to Buenos Ayres, to ply as a packet between that port and Montevideo, put into Bermuda on the 28th, to repair damage, having sprung aleak. She struck on the rocks at the "West End" on the night of the 25th, but did not sustain much injury. A letter from a correspondent at Bermuda dated Nov. 1st, says, "The Marco Bozzaris is now *beached*, to undergo repairs. It is feared that this cannot be effectually accomplished without taking out all her machinery. The schr ——, from Baltimore, arrived last evening in six days. The Vernon, bearing the flag of Vice-Admiral Cockburn, is just arrived from Halifax."—[Jour. of Com.]

WATER.—The report of the Engineer who was appointed to examine the best route for supplying this city with pure and wholesome water, was presented last Monday in the Board of Aldermen, and ordered to be printed. It is voluminous and accompanied by many plans and maps of the ground between this and the Croton river, the only unfailing source, whence a sure and adequate supply can be drawn. In a matter of this primary importance and magnitude, we hope the decision will be taken at once to do whatever is undertaken upon a scale adequate to the wants and means, present and prospective, of this great city. There will be no economy, and certainly no credit, for the sake of diminishing present expenditure, in adopting temporary expedients. Let the work be done for posterity, as well as for the existing generation; and posterity will not then have reason to complain of being burdened with a portion of the expense its proper execution may require.

The Rail Road Accident.—The particulars of the dreadful accident near Hightstown, as given in the papers, were in the main correct. We have since been informed, that Mr. Lex, of Lebanon, Pa., who was so shockingly mangled as to render it impossible to bring him to the city, expired at Hightstown, in a few hours after the accident. Capt. Vanderbelt, also left behind, is doing well. He had been previously hurt by the overseting of a gig, near New York: and was, in consequence, much more liable to injury. Mrs. Bartlett and family are out of danger, with the exception of one of her children, who lies in a very languishing state, at Congress Hall.—The remainder of the wounded are said to be in a fair way of recovery. They are Miss Whitehead, of Newport, R. I., one arm broken; Rev. John West, R. I., leg broken, and bruised; Mr. King, R. I., severely bruised; Mr. Dreyfous, of this city, bruised, not dangerously; Mr. Charles, injured severely in the thigh; a medical gentleman from Philipsburgh, Pa., name not ascertained, ribs broken, and bruised.—[Philadelphia paper.]

Law of Patent.—Yesterday afternoon, an important case, which has occupied a week, was decided in the Circuit Court of the United States for this District,—John Ames, of Springfield, against Charles Howard and Wells Lathrop, of South Hadley. The action was brought for the infringement of a patent right, and damages were claimed for the unlawful use of two of his patent Cylinder machines for making paper, from October 26, 1832, to April 9, 1833 The defence rested on the alleged invalidity of the patent for various causes. A *crowd* of witnesses were examined during four days of last week, on behalf of either party. Counsel for the plantiff, W. Bliss, of Springfield, and B. Rand of this city; and Geo. Bliss, of Springfield, and R. Fletcher, of this city, for the defendants. The jury returned a verdict for the plaintiff for $412 50, which being tripled as the law requires, is $1237,50 damages. It is stated that the result of this trial is of very great importance to the paper manufacturers; about 500 of the machines being in use by them, who will each be liable for damages, in an amount of nearly half a million of dollars.

The defendants, we understand, have decided on having it go to the Supreme Court of the U. States, and Daniel Webster has been retained by the plaintiff.—[Boston Centinel.]

We are glad to see that there is some prospect of a peaceable termination of the difficulties in Alabama. The Mobile Commercial Register states that the Marshal has given public notice that the settlers on the Creek lands will not be disturbed before the 15th of January. This will afford time for the present excitement among the people of the State to cool in some measure, unless the Governor should persevere in his determination to render the United States officers accountable to the laws of the State for past proceedings, without waiting to ascertain the sense of the Legislature, or until the matter is brought before Congress.

Sparks' Life of Morris.—The Paris Journal des Debats of the 10 September contains a review of this work, which as it declares has already fixed the attention of Europe. The attention of the reviewer is principally directed to the writings of Mr. Morris on the subject of the French Revolution.

[*From the Sacket's Harbor Courier of Nov.* 7.]

GREAT FIRE AT KINGSTON, U. C.—We learn that on Friday night last, at about half past ten o'clock, a fire broke out in a small back shop in the most central and business part of Kingston. It immediateiy communicated to other buildings, consuming in all rising of *twenty* valuable buildings, and among them, we regret to learn, the Printing Office and Bookstore of Mr. Macfarlane, Editor of the Kingston Chronicle and Gazette. Value of property destroyed, from 80,000 to $100,000, upon which there were insurances to the amount of about $40,000.

Flatbush Property.—Several acres of woodland at Valley Grove, three miles from Brooklyn, adjoining the turnpike, were lately sold by G. L. Martense, at five hundred dollars per acre. Two acres owned by Mr. M. Clarkson, in the same neighborhood, three and a half miles from the ferry, sold for one thousand dollars per acre.—[Brooklyn Star.]

NEW ORLEANS, Oct. 24.—We take pleasure in stating that the account of the loss of the steamboat Rapide, which was published in some of the morning papers, is an error. She arrived at this port this morning.

Naval Department.—Extract of a letter from Doctor Wm. Turk, the fleet surgeon of the U. S. naval forces in the Mediterranean, received at the Navy Department, dated the 13th July, 1833, on board the Frigate United States.

"One year has elapsed since I entered on the duties of Fleet Surgeon: during that period only one man has been lost by disease on board this ship.

"It was formerly too much the practice to wet the decks, without sufficient regard to the weather, or the opinion of the medical officers on the subject. I am happy to say there is a great improvement in this respect, to which may be ascribed, in some measure, the greater share of health enjoyed by our crews at present."

U. S. FRIGATE BRANDYWINE.—We understand that orders have been issued by the Navy Department, for the equipment of the United States frigate Brandywine, now lying at the Navy Yard, Brooklyn. She has recently been hove down, thoroughly overhauled, and recaulked, and will be ready for sea by the first of February.

It was only necessary to witness the great trouble and expense of heaving down this large ship, to have satisfied any one of the great importance of a *Dry Dock* at this naval station. We hope that Congress will, at its approaching session, make an appropriation for this object.—[Gazette.]

[*From the Globe.*]

We understand that the *Arcade Bank* at Providence, R. I., and *The Farmers and Mechanics' Bank* at Hartford, Conn., have been selected by the Secretary of the Treasury as depositories of the public money at those places.

[*From the Daily Advertiser.*]

Preparing for publication in a volume, *The Letters of Major Downing, originally published in the New York Daily Advertiser*, ornamented with engravings illustrating some of the most interesting scenes described in them, from designs by the most distinguished artist in the United States in this species of drawing. This edition will be corrected, improved, and enlarged, by the illustrious author;—an advantage which no other edition can enjoy. It will contain no letters, except those written for, and published in, the above-mentioned paper, and such as may be added to the number by the same author, who, we are happy to say, has kindly consented to continue his labors occasionally for the benefit of his country.

Much has been said about the "original Major Downing." We have taken no part in the controversy, being perfectly satisfied that our correspondent has shown more originality than any other writer under that title, or almost any other; and no man's works have received more decisive proofs of public approbation, and universal popularity.

The publication will be forwarded as soon as the illustrations can be prepared.

Accident.—The Steamboat North America arrived yesterday afternoon from Albany considerably disabled. We learn that on Monday evening about seven o'clock, when opposite Catskill, the North America was run into by the sloop Gen. Livingston, bound to the latter place. The bowsprit entered the side of the steamboat about 50 feet from the bow, carried away one of her chimneys, and caused other damage. The sloop lost her bowsprit and mast, which fell upon the steamboat. No person injured.—[Mercantile.]

The beautiful new ship HAVANA, Capt. Correja, is now in her berth on the west side of Old Slip; and as she is to sail for Havana on Sunday next, those who admire perfection in ship-building will do well to visit her. There is a combination of strength, beauty, and accommodation, seldom, if ever exhibited in a vessel of her size. Nothing to our eye, is wanting, nor is there any thing about this vessel superfluous, unless it be the splendor of her finish. We understand her state-rooms are all engaged, which accommodate twenty-four passengers.—[Gazette.]

Another new ship, named the Caledonia, was launched from one of the ship yards of Baltimore on Saturday last. She is 140 feet long and 550 tons burthen, and is intended for one of the packets to ply between Virginia and Liverpool. Messrs. J. J. Brander & Co. merchants of Petersburg, are her owners. We rejoice, says the Philadelphia Inquirer, at these evidences of Southern enterprize in the way of commerce. They will in their results, prove excellent antidotes to nullification.—[Gazette.]

COLONIZATION.—In the Tennessee House of Representatives, Oct. 30th, the following resolutions were adopted:

Resolved, That the select committee on the subject of the American Colonization Society, be instructed to enquire into the expediency of memorializing Congress to make an appropriation of $100,000 annually, to be applied by the said Colonization Society in transporting to Liberia the free coloured population of the United States.

Resolved, That said committee inquire into the expediency of making an appropriation by this general assembly of $500 annually to aid the Tennessee Auxiliary Colonization Society to be applied by the said society in transporting to the colony of Liberia the free colored population of the state of Tennessee.

OFFICIAL.—ORDER No. 97.

H. Q. OF THE ARMY, ADJ. GEN'S OFFICE, Washington, October 31st, 1833.

1. The following list of Promotions and Appointments in the Army of the United States made by the President since the publication of the "Order" No. 80, of July 6th, 1833, is published for general information:—

I. PROMOTIONS.

First Regiment of Artillery.

1st Lieutenant Giles Porter, to be Captain, 30th September, 1833, vice Smith, resigned.

2d Lieutenant John McClellan, to be 1st Lieutenant, 30th September, 1833, vice Porter, promoted.

2d Lieutenant John Williamson, to be 1st Lieutenant, 30th September, 1833, vice Prescott, resigned.

Brevet 2d Lieutenant William H. Pettes, to be 2d Lieutenant, 30th September, 1833, vice McClellan, promoted.

Brevet 2d Lieutenant Lorenzo Sitgreaves, to be 2d Lieutenant, 30th September, 1833, vice Williamson, promoted.

Third Regiment of Artillery.

Brevet 2d Lieutenant Erasmus D. Keyes, to be 2d Lieutenant, 31st August, 1833, vice Chase, resigned.

Brevet 2d Lieutenant William Wall, to be 2d Lieutenant, 30th September, 1833, vice Hackley, resigned.

Fourth Regiment of Artillery.

Brevet 2d Lieutenant John N. Macomb, to be 2d Lieutenant, 30th September, 1833, vice Norton, resigned.

Brevet 2d Lieutenant, Edward Deas, to be 2d Lieutenant, 31st October, 1833, vice Pendleton, resigned.

First Regiment of Infantry.

1st Lieutenant Jefferson Vail, to be Captain, 11th July, 1833, vice Harney, resigned.

2d Lieutenant Joseph H. Lamotte, to be 1st Lieutenant, 11th July, 1833, vice Vail, promoted.

Brevet 2d Lieutenant Ingham Wood, to be 2d Lieutenant 30th September, 1833, vice Covington, resigned.

Third Regiment of Infantry.

1st Lieutenant Benjamin Walker, to be Captain, 31st August, 1833, vice Webb, resigned.

1st Lieutenant Lewis N. Morris, to be Captain, 31st October, 1833, vice Green, promoted.

2d Lieutenant Wm. R. Montgomery, to be 1st Lieutenant, 31st August, 1833, vice Walker, promoted.

2d Lieutenant John Archer, to be 1st Lieutenant, 31st October, 1833, vice Morris, promoted.

Brevet 2d Lieutenant Albert G. Blanchard, to be 2d Lieutenant, 31st August, 1833, vice Montgomery, promoted.

Brevet 2d Lieutenant James H. Taylor, to be 2d Lieutenant, 31st October, 1833, vice Archer, promoted.

Fourth Regiment of Infantry.

2d Lieutenant Timothy Paige, to be 1st Lieutenant, 17th October, 1833, vice Trenor, appointed Captain of Dragoons.

Brevet 2d Lieutenant Bradford R. Alden, to be 2d Lieutenant, 15th September, 1833, vice Harford, resigned.

Brevet 2d Lieutenant Frederick Wilkinson, to be 2d Lieutenant, 17th October, 1833, vice Paige, promoted.

Fifth Regiment of Infantry.

Brevet Major John Green, Captain of the 3d Infantry, to be Major, 31st October, 1833, vice Bender, resigned.

1st Lieutenant William E. Cruger, to be Captain, 1st October, 1833, vice McCabe, resigned.

2d Lieutenant Alexander S. Hooe, to be 1st Lieutenant, 1st October, 1833, vice Cruger, promoted.

Brevet 2d Lieutenant William Chapman, to be 2d Lieutenant, 1st October, 1833, vice Hooe promoted.

Seventh Regiment of Infantry.

2d Lieutenant Washington Seawell to be 1st Lieutenant, 12th July, 1833, vice Morton, resigned.

II. APPOINTMENTS.

Staff.

Samuel G. I. De Camp, Assistant Surgeon, to be Surgeon, to take effect 1st December, 1833, vice McMillan, resigned.

Samuel W. Hales, to be Assistant Surgeon, 23d July, 1833.

George F. Turner, to be Assistant Surgeon, 23d July, 1833.

John M. Gardner, to be Assistant Surgeon, 9th August, 1833.

Melines C. Leavenworth, to be Assistant Surgeon, 1st September, 1833.

J. J. B. Wright, to be Assistant Surgeon, 25th Oct., 1833.

Wm. Hughey, to be Assistant Surgeon, 25th October, 1833.

William S. Harney, to be Paymaster, 1st May, 1833.

Edwards S. Fayssoux, to be Military Store Keeper, 24th August, 1833.

Regiment of Dragoons.

APPOINTMENTS TO FILL ORIGINAL VACANCIES.

Captains.

1. Eustace Trenor,
2. Nathan Boone,
3. Lemuel Ford,
4. Jesse B. Browne,
5. Jesse Bean.

1st Lieutenants.

1. T. B. Wheelock,
2. C. F. M. Noland,
3. James W. Hamilton,
4. B. D. Moore.

2d Lieutenants.

1. James W. Shaumburg,
2. James Clyman,
3. W. Bradford,
4. John L. Watson.

Brevet 2d Lieutenant John S. Van Derveer, of the 6th Infantry, to be brevet 2d Lieutenant, 1st July, 1830.

Brevet 2d Lieutenant William Eustis, of the 3d Infantry, to be brevet 2d Lieutenant 1st July, 1830.

Brevet 2d Lieutenant George W. McClure of the 5th Infantry, to be brevet 2d Lieutenant, 1st July, 1830.

Brevet 2d Lieutenant E. G. Eastman, of the 2d Infantry, to be brevet 2d Lieutenant, 1st July, 1831.

Brevet 2d Lieutenant Thomas J. McKean, of the 4th Infantry, to be brevet 2d Lieutenant, 1st July, 1831.

Brevet 2d Lieutenant Lus. B. Northrop, of the 7th infantry, to be brevet 2d Lieutenant, 1st July, 1831.

Brevet 3d Lieutenant Gaines P. Kingsbury, of the Mounted Rangers, to be brevet 2d Lieutenant, 1st July, 1832.

Brevet 3d Lieutenant James M. Bowman, of the Mounted Rangers, to be brevet 2d Lieutenant, 1st July, 1832.

Brevet 3d Lieutenant Asbury Ury, of the Mounted Rangers, to be brevet 2d Lieutenant, 1st July, 1832.

Brevet 3d Lieutenant Albert G. Edwards, of the Mounted Rangers, to be brevet, 2d Lieutenant, 1st July, 1832.

III. CASUALTIES.—*Resignations.*

Major.

George Bender, 5th Infantry, 31st October, 1833.

Captains.

Walter Smith, 1st Artillery, 30th September, 1833.
Wm. S. Harney, 1st Infantry, 11th July, 1833.
Stephen H. Webb, 3d Infantry, 31st August, 1833.
Robt. A. M'Cabe, 5th Infantry, 1st October, 1833.

1st Lietenants.

Jonathan Prescott, 1st Artillery, 30th September, 1833.
Alex. H. Morton, 7th Infantry, 12th July, 1833.

2d Lieutenants.

George E. Chase, 3d Artillery, 31st August, 1833.
Charles W. Hackley, 3d Artillery, 30th September, 1833.
William A. Norton, 4th Artillery, 30th September, 1833.
Eras. F. Covington, 1st Infantry, 30th September, 1833.

Brevet 2d Lieutenants.

Wm. H. Sidell, 1st Artillery, 1st October, 1833.
John E. Bracket, 2d Artillery, 31st August, 1833.
Henry Waller, 2d Artillery, 9th October, 1833.
Wm. N. Pendleton, 4th Artillery, 31st October, 1833.
Joel Riggs, 1st Infantry, 9th October, 1833.
Lewis Howell, 7th Infantry, 31st October, 1833.
Nathl. W. Hunter, 7th Infantry, 1st October, 1833.

Surgeon.

Robert McMillian, to take effect 1st December, 1833.

Assistant Surgeons.

Henry Stevenson, 31st August, 1833.
Robert E. Kerr, 31st August, 1833.

DIED.

Assistant Surgeon.

Jos. D. Harris, 26th September, 1833.

2. The officers *promoted* will join their proper stations and companies; those on detached service, or who may have received special instructions from this office, will report by letter to their respective Colonels.

3. Brevet 2d Lieutenant *Benj. E. Dubose*, of the 3d Regiment of Infantry, a graduate of 1833, having failed to join his Regiment on the 1st day of October, is, in conformity with the Regulations, *dropped* from the rolls of the Army, to take effect from that date.

By order of MAJOR GENERAL MACOMB.

R JONES. Adjt. Gen'l.

MISCELLANY.

Mechanical Ingenuity.—M. Droz being at Madrid, he exhibited to the king of Spain a clock, upon which were figures of a shepherd, a dog, and a negro. The shepherd played six airs upon his flute, the dog in the meantime approaching and caressing him. The king expressed his admiration of this, when M. Droz, replied that the gentleness of his dog was but the least of his good qualities. If, he added, your majesty will deign to touch one of the apples in the basket by the side of the shepherd, his dog will evince his fidelity also. The king did so, when the dog flew at his hand, and barked so loudly, that a living dog, which was in the room, gave tongue; and the courtiers, with the exception of the minister of marine hastily left the room, not doubting but M. Droz was a sorcerer. The king, who, of course, was in the secret, desired the minister of marine to ask the negro what o'clock it was. He did so, and obtained no answer. M. Droz, informed him, that, as the negro was ignorant of Spanish, the question should be asked in French. The minister asked it accordingly, and the nergo answered so much to the consternation of the minister that he took flight, vowing it was the work of no one but the devil.—[Agassiz's Jeurney.]

Remarkable Women.—It is worthy of notice that those women whose excellences have obtained the esteem of posterity have invariably united to their more remarkable qualities the gentleness and delicacy characteristic of the sex. Had they not done so, they would, indeed, scarcely have been loved; and love is the sentiment, with regard to the future as well as the present, which ought to be the chief ambition of a woman to excite. She should desire to be remembered, not only with admiration, but with tenderness; and, therefore, in her nothing can compensate for the absence of those qualities which call forth affection. In looking back, then, upon our celebrated women, it is with pleasure that we remark, that kindness and sweetness gave the polish to their characters. They were not the stern mentors of society; on the contrary, they were as distinguished for mildness as for any other virtue; and we feel that besides being the objects of our esteem, they would have been, had we known them, the companions of our choice. Their humility is no less deserving of praise. There has always been an absence of pretension in superior women, which is consistent with our our preconceived notions of what they ought to be, and with our own actual observation. The position which they occupy is conceded to them, not because they assume it, but because it naturally belongs to them. And the influence they exert is of a quiet and gentle kind. In considering the lives of the most illustrious amongst them, we cannot but be struck with the power they possessed of swaying opinion. Contrast, for instance, the influence of Lady Russell and Mrs. Hutchinson with that of ordinary women. The latter may be, indeed, allowed the control in all minor matters, may be supreme in their domestic arrangements, may be petted and indulged; but if their minds can take no higher range, they will either not be consulted in things of greater moment, or their opinion will have no weight. Yet lady Russel and Mrs. Hutchinson never obtruded their advice, or made any show of their power: their counsel was asked because it was needed, and followed because it was found to be of value. The influence of such women has not been confined to domestic life, but has embraced and adorned an ampler sphere. To say nothing of the effect of their example, the success that has sometimes attended them as authors may be considered a gratifying tribute to their usefulness. Society will acknowledge the debt it owes to those of them who, as moral and religious writers, have attracted public attention, and so materially affected the tone and habits of their sex. Of this, perhaps the most eminent example has shed its lustre on our own day.—[Mrs. Sanford's Female Worthies.]

Dr. Chalmers and Robert Hall.—On the day he preached a sermon in reference to the Luddites, a circumstance occurred which disconcerted all his feelings, and unfitted him for his public engagement.

Dr. Chalmers, then of Glasgow, was on his way to London, and informed him by letter that he intended onthat day to be one of his auditors. Unfortunately the message did not arrive till Sabbath morning, within an hour of the commencement of public worship. Mr. Hall had formed so high an estimate of the abilities of this unexpected visiter that he was actually deterred from entering the pulpit; nobody could persuade him to it, and a member of the church was obliged to supply his place. Mr. Hall did not recover his tranquillity the whole of that day. At the close of the morning service Dr. Chalmers called on him at his own house, not knowing but his absence had been occasioned by ill health. After much hesitation he at length consented to preach in the afternoon, on condition that his reverend friend would deliver an evening lecture. This was agreed to; but from the agitated state of his feelings, Mr. Hall was heard to great disadvantage. This was often the case, on much slighter occasions; the appearance of some distinguished stranger, any thing like prying curiosity, or secular applause, would at any time discompose him; and his loftiest strains of eloquence were seldom heard but when he emerged from the depths of private devotion to be embosomed among his own people. In the evening, Dr. Chalmers followed up the subject of the afternoon's discourse, with one on the necessity of immediate repentance, which produced a very powerful sensation on the auditory. Mr. Hall heard with rapturous delight, and said afterwards to a friend, "He stops the people's breath sir: they cannot breathe under such a preacher." And certainly the sermon was one of great merit, though some passages were a little obscured by the Highland pronunciation. The parties spent the remainder of the evening together at Mr. Hall's. The unnerved preacher now recovered in some degree his elasticity, and was ready to launch into a wild field of conversation; but nothing of any importance transpired. The visiter who had frightened Mr. Hall from his propriety now seemed frightened in return; nothing could be elicited, no topic of the smallest interest was brought forward, except that Mr. Hall offered some remarks on various books and authors, to which Dr. Chalmers readily assented, and especially on the absurd attempt of Professor Kidd to reduce the doctrine of the Trinity to a metaphysical theory, to be illustrated by the analogies of nature. A cautious reserve was manifest, accompanied perhaps with a silent admiration of the orator who appeared only in dishabille, and had not that day put forth half his strength.—[Morris's Biographical Recollections of Robert Hall.]

Folly of Objections to Education.—It is not easy to conceive in what manner instructing men in their duties can prompt them to neglect those duties, or how that enlargement of reason which enables them to comprehend the true grounds of authority and the obligation to obedience should induce them to disobey. The admirable mechanism of society, together with that subordination of rank which is essential to its subsistence, is surely not an elaborate imposture, which the exercise of reason will detect and expose. The objection we have stated implies a reflection on social order, equally impolitic, invidious and unjust. Nothing in reality renders legitimate government so insecure as extreme ignorance in the people. It is this which yields them an easy prey to seduction, makes them the victims of prejudice and false alarms, and so ferocious withal, that their interference in a time of public commotion is more to be dreaded than the eruption of a volcano.—[Robert Hall.]

The Banks of Newfoundland.—These banks extend over a space of forty thousand miles, and are from thirty to forty-five fathoms below the surface of the ocean. The shoals are inhabited by innumerable tribes of muscles and clams, to which it is a favorite residence, as they can easily bury their shells in the soft sand. They have enemies to contend with. The codfish resort to this coast to prey on them. They keep a constant watch, and swim about a foot above the sub-marine sands; when a muscle opens its shell, it is immediately seized and devoured. At other times the fish do not wait: they are provided with a horny protuberance round their mouths; with these the burrow in the sand, and capture the muscle in its shell. The fishermen of various nations, French, English, and Americans, who resort to these banks, take annually from eight to ten millions of fish; on opening them they find the remains of twenty or fifty muscles in each—sometimes the muscle-shells are found either wholly or partially dissolved. The first care of the fishermen, after taking their stations, is to ascertain the depth of water: the lines must be regulated so as to lie on the bottom, where the fish are always engaged in this species of submarine war.

The consort of the Emperor of China died at Pekin on the 15th of July. A general morning has been ordered in consequence. The Mantshur *employés* are for 28 days to wear garments of coarse white linen, and caps without tassels or buttons; during a hundred days they must not shave their heads. The mongolian *employés* are to assume the same mourning, with the exception of the white garments. The Chinese must leave their heads unshaved for the same period, and are to wear no tassels on their caps for seven days. The right of nominating the Empress belongs to the Emperor's mother, who solicits, within three years, one of the five spouses of her son for that office.

Slaughter of Whales: their strong affection for their young.—After dinner I went to view the whales: what a slaughter! One of the gentlemen who was present at the taking of one of them yesterday told me, that the water of the bay for a mile distant from the place of attack was dyed with their blood. The Shetlanders having succeeded in driving them into shallow water, where they could not swim freely, attacked them with spears, and even swords, and so dextrous are these islanders, that in general they pierced their hearts at the first thrusts, so that most of them were killed in an instant! About fifty persons were present at the attack, and it is the custom here, that each person has share and share alike. Mr. Robinson, a respectable merchant of this place, amused me by the following anecdote:—'Hearing of the shoal of whales that had entered the bay, five poor women got a boat, and set off hovering on the skirts of the scene of action: a large whale, that had received his death wound, and was striving to regain the ocean, failed: the women perceived him, rowed up boldly to him, entangled him, his strength being nearly gone, made him fast to their boat, and towed him safely off to a landing-place near to their own dwelling!' In this shoal there were a few young ones, and it is the young in general that occasion the capture of the old ones; for they heedlessly run into the shoal water, and so attached are these monsters to their offspring that they will risk their lives to save them. A friend told me that he saw one of the female whales take her wounded young under her breast fin, and endeavour to make her escape with it. He saw another young one, which appeared to be greatly terrified, dash itself upon the shore, where it was soon killed: the mother, which had been near the shore, had turned and was regaining the deep water; but missing her young one, and finding no doubt by instinct, or smell, that it had gone ashore, she turned to again, took the same direction, and absolutely dashed herself on shore aside her young, where she also was immediately speared.—On examination of several of these females, I found two cavities near the navel, on each side, in which their teats were included, and which they can extrude at pleasure, in order to suckle their young; thus exemplifying Lam. iv., 3, "*The Sea monsters draw out their breasts to their young.*"—[Life of Adam Clark.]

POETRY.

[For the New-York American.]

The author of the following lines, is one deeply tried in the furnace of affliction, a young and interesting female, for nine wearisome years, the victim of excruciating, uncompromising disease, deprived of nature's sweet restorative—sleep—unless obtained by artificial means, and of most of those comforts which scarce serve to alleviate the sufferings of many more fortunate, tho' perhaps not more happy, who recline on beds of down—she is a christian.

In the restless watches of the night she composed many pieces of poetry, touching from their strain of simple pathos, and extraordinary, as the productions of a secluded, self-educated girl, whose reading has been quite limited, her favorite author Cowper. Unable to endure the fatigue of writing, she at some convenient time, perhaps after the lapse of weeks, dictated to an amanuensis, her aged and most venerable father, these effusions of her innocent mind. It was a beautiful sight to look upon. The poor girl, from her bed of suffering, repeated her verses line by line to the patient old man (now in his seventy-eighth year and rapidly declining) while he carefully listened to her words and committed them to paper.—Strange to say, though quite hard of hearing when addressed by others, he caught every sound from the lips of his loved child of sorrow, though uttered in a low and plaintive voice. It is probable that a collection of her poems will ere long be published. The present one appeared in an eastern paper, but probably has not met the eye of many of your readers. L.

ODE TO THE POPPY.

Tho' varied wreaths of myriad hues,
As beams of mingling light
Sparkle replete with pearly dews,
Waving their lucid leaves profuse,
To captivate the sight:
Tho' fragrance sweet exhaling bleud
With the soft balmy air,
And gentle zephyrs, wafting wide,
Their spicy odors bear;
While to the eye,
Delightfully,
Each flowret laughing blooms,
And, o'er the field
Prolific, yields
Its incense of perfumes;
Yet, one alone o'er all the plain
With lingering eye I view;
Hasty I pass the brightest bower,
Heedless of each attractive flower,
Its brilliance to pursue.
No odors sweet proclaim the spot
Where its soft leaves unfold,
Nor mingled hues of beauty bright,
Charm and allure the captive sight,
With forms and tints untold;
One simple hue the plant portrays,
Of glowing radiance rare,
Fresh as the roseate morn displays,
And seeming sweet and fair;
But, pressing close, its nauseous breath
Disgusts the bright and gay,
And from the hand, with eager haste,
Is careless thrown away,
Unthinking that, in evil hour,
Disease may happiness devour,
And that fair form, elastic now,
To Misery's wand may hopeless bow.
But reason leads wan sorrow forth,
To seek the lonely flower,
And blest experience kindly proves
Its mitigating power.
Its own bright hue the sight can trace,
The brilliance of its bloom;
Tho' misery veil the weeping eyes,
Tho' sorrow choke the breath with sighs
And life deplores its doom,
This fated flower,
In desperate hour,
A balsam mild shall yield;
When the sad sinking heart
Feels every aid depart,
And every gate of hope forever sealed,
Then shall its potent charm
Each agony disarm,
And its all healing power shall respite give.
The frantic sufferer then,
Convulsed and wild with pain,
Shall own the sovereign remedy and live.
The dews of slumber now
Pass o'er the aching brow,
And o'er the languid lids balsamic fall,
While fainting nature bears,
With dissipated fears,
The lowly accents of soft Somnus' call:
Then will affection twine
Around this magic flower,
And grateful memory keep
How in the arms of sleep
Affliction lost its power.

1825 C. T.

SONNET.—A VILLAGE TOMBSTONE.

Approach! thou visitant of gorgeous tombs,
And costly mausoleums, whose august
And sculptured massiveness bespeaks the dust
Beneath once noble.—Here no statue glooms
Rebuke from its dark niche, nor earth resumes
Her own with ghastly pageantry; nor bust,
Nor aught of grandeur's dim heraldic trust,
Here flatters the poor clay that clay consumes.
Approach, and mark where last the soul hath heaved,
And trace one record of the lowly dead,—
"He lived—he died." What sculptor o'er achieved
More on rich marble, trusted not when read?
This simple stone speaks truth, and is believed.

Bishop Wearmouth. O . . . . .

AN INTERESTING AND USEFUL MAP.

A friend of ours has now in a state of forwardness, a Map upon which will be delineated nearly all the Railroads now chartered in the U. States. It is designed to show the *present* contemplated connexion of the different lines, as well as where others may hereafter be constructed to connect with them. It will be completed in a few weeks, and may be had either in sheets, or put up in morocco for pocket maps, in any quantity, by applying to the subscriber.

D. K. MINOR, 35 Wall street.

New-York, August 14, 1833.

TO STEAMBOAT COMPANIES.

☞ PROFESSOR RAVINESQUE, of Philadelphia, offers his services to render steamboats incombustible, and not liable to sink, even by the bursting of boilers, or striking against snags, sawyers and rocks. This will save many boats, much property, and the lives of hundreds every year. Those who neglect this easy improvement, deserve to be neglected and deserted by the public as unmindful of safety. Apply, post paid,

SPRAGUE & Co

MARRIAGES.

Last evening, at Carroll Place, Bleecker street, by the Rev. J. B. Felix, I. M. Henriques, Esq. late of Kingston, Jamaica, to Esther, daughter of the late David Nunes, Esq. also of Kingston, Jamaica.

On Thursday evening, by the Rev. John Goldsmith, Samuel Leverich, to Sarah, daughter of the late Jesse Leverich, Esq. of Newtown, L. I.

On the 4th inst. Thos. Sears, to Isabella, eldest daughter of the late John Westray, all of this city.

In Brooklyn, L.I. on Tuesday evening, 19th instant, by the Rev. Mr. Dwight George Worthington Dow, (of the firm of Josiah Dow & Co. New York,) to Miss Anna De Be Voeise, daughter of the late Christopher Prince.

At Albany, on Tuesday morning, the Rev. Wm. Lehman, Professor of Modern Languages in the University of Georgia, to Miss Harriet Maria, youngest daughter of Abm. Van Vechten, Esq. of Albany.

At Greenwich, (Conn.) on the 28th ult. S. H. Seaman, of Albion, N. York, to Miss Eunice R. Hobby, of the former place.

At Philadelphia, Selby Bradford, to Mrs. Mary Wood.

At the same place, Wm. Duane, Jr. Esq. to Louisa Brooks.

DEATHS.

This morning, at the City Hotel, Mr. Joseph Haertl, a native of Bavaria, aged 23 years.

Mr. Haertl was one of those accomplished musicians from Bavaria, whose concerts have delighted so many parts of our country. His remarkable bass voice will be long remembered. The deceased, who, with his comrades, was exposed to such great peril by the conflagration of the Hotel in Montreal last winter, never recovered from the cold he took on that occasion; and after lingering, with occasional temporary improvement, until now, has su k at last in a strange land; and yet not among strangers, for he had made many friends; and those, moreover, so long his companions in his beautiful art, were faithful and assiduous around his death bed.

On Wednesday evening, Mr. Joseph Hill, in the 32d year of his age.

Friday night, 8th instant, at ¼ before 12 o'clock, in full assurance of a blissfull immortality, after an illness of 18 months, which he bore with a patience peculiar only to the Christian, Mr. John Young, aged 39 years and 21 days.

At Philadelphia, on Monday, 4th inst., in the 77th year of his age, R. E. Griffith, Esq.

At his residence in Stillwater, on Monday, the 28th ult. Major Ezra Buell, in the 90th year of his age. So fall our Revolutionary patriots. He was an officer in the Revolutionary army for six years; but at the battle of Beune's Heights he left his company and became a pilot for Gen. Gates's army, and led every brigade to its station. In the battle of October 7, 1777, he was wounded in the side at the time of leading Col. Morgan into action, but did not leave the field. He was never married, but lived with one family upwards of sixty years.

In St. Mary's county, Md., on the 19th ult. the Hon. Raphael Neale, formerly member of Congress, for that District.

At Washington, on Saturday last, Mr. Lewis Clephane, aged about 81 years Mr. C. was a native of Scotland. He emigrated to this country and settled in New York in the year 1782.

On the 17th of Oct. at her residence, New Smyrna, East Florida, Mrs. Mary Dunham, widow of the late David Dunham, of this city.

At Fort Smith, Arkansas, of fever, on the 26th of September last, in the 30th year of his age, Josiah Dwight Harris, M. D. Surgeon to the corps of Rangers—son of the late Rev. Wm. Harris, D D President of Columbia College.

It is seldom we have the task of noticing the death of so promising a young man. In his profession Dr. Harris stood first among its junior members in this city, and would no doubt (had he possessed pecuniary advantages) have attained its highest honors. His examination for his situation in the army was brilliant, showing an accuracy and degree of acquirement seldom equalled by one so young—he passed first and received the highest honor that could be conferred. Dr. Harris had warmly endeared himself to those with whom he was associated, and his loss is deeply lamented by an afflicted family and a large circle of friends—but the "brilliant noon" of his existence has been curtailed by "death's gloomy night," and the fair promise of his rising greatness is shrouded in the tomb.

BOSTON AND WORCESTER RAILROAD.

Proposals will be received until the 2d December next, for the GRADING AND MASONRY of the Third Division of the Road from Southborough to Grafton.

Further information may be obtained at the Company's Rooms, Nos. 7 and 9 Joy's Building, Boston.

n16 3t NATHAN HALE, Superintendant.

GRACIE, PRIME & CO. having this day taken into co-partnership JOHN CLARKSON JAY, will continue their business under the same firm.—New-York, 1st October, 1833.

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

TO RAILROAD COMPANIES.

☞ PROFESSOR RAFINESQUE, of Philadelphia, will undertake to build CARS that will carry along their own railway, and may be used on level M'Adam roads. They will save ten millions of money to be wasted on 1000 miles of iron railroads to be laid in the United States within a few years, and dispense with tracks and double tracks. These Cars may be drawn by horses or steam. He claims to have discovered them ever since 1825, by his caveats filed in the Patent Office. Apply, post paid. S1 R J M M & F

☞ THE ADDRESS OF J. P. KENNEDY, Esq. of Baltimore, delivered before the Members of the American Institute in this city, together with a full account of the FAIR, held at Masonic Hall, for 1833, and for which a copy-right has been secured, is just published in pamphlet form, at the office of the Mechanics' Magazine, No. 35 Wall street, where it may be had by the single number, dozen, or hundred. n16

FOR SALE,

☞ ATLANTIC JOURNAL AND FRIEND OF KNOWLEDGE—A Quarterly Journal, by Professor Rafinesque, of Philadelphia, begun in the spring of 1832, with wood cuts, &c dedicated to Historical and Natural Sciences, Botany, Agriculture, &c. at one dollar per annum.

MEDICAL FLORA OF THE UNITED STATES, in 2 vols. with 100 plates, containing also the economical properties of 500 genera of American plants. $3.

MANUAL OF AMERICAN VINES, and Art of Making Wines, with 8 figures. 25 cents.

FISHES AND SHELLS OF THE RIVER OHIO. 1 dollar.

AMERICAN FLORIST, with 36 figures—price 36 cts.

, Orders for these works, or any other of Professor Rafinesque's, received at this office. A9 tf J M & F

INCOMBUSTIBLE ARCHITECTURE.

☞ INCOMBUSTIBLE dwelling-houses and buildings of all kinds devised or built in New-York, or any part of the United States, as cheap as any other combustible buildings Actual buildings and houses rendered incombustible at a small additional expense.

SHIPS of all sorts, and Steamboats, rendered incombustible, and not liable to sink, at a small expense.

For sale, 10,000 lbs. of ANTIGNIS, or Incombustible Varnish, at one dollar per lb.

Apply to C. S. RAFINESQUE, Professor of Hist. and Nat. Sciences, Chemist, Architect, &c. in Philadelphia, No. 69 North 6th street. A pamphlet given gratis.

References in New-York.—Mr. Minor, Editor of the Mechanics' Magazine; Messrs. Rushton & Aspinwall, Druggists.

Editors in the city or country, copying this advertisement, will receive a commission on any contract procured by their means. S1 R J M M & F

☞ TOWNSEND & DURFEE, of Palmyra, *Manufacturers of Railroad Rope*, having removed their establishment to Hudson, under the name of *Durfee, May & Co.* offer to supply Rops of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne county, Pennsylvania.

Hudson, Columbia county, New-York, January 29, 1833. F8 tf

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality, warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane. J31 6t

ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other decription of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norris. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads,

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation. J25 tf

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. n16

RAILROAD CAR WHEELS AND BOXES,

AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete, at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

INSTRUMENTS

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them upon application, to any persons desirous of perusing the same. m30